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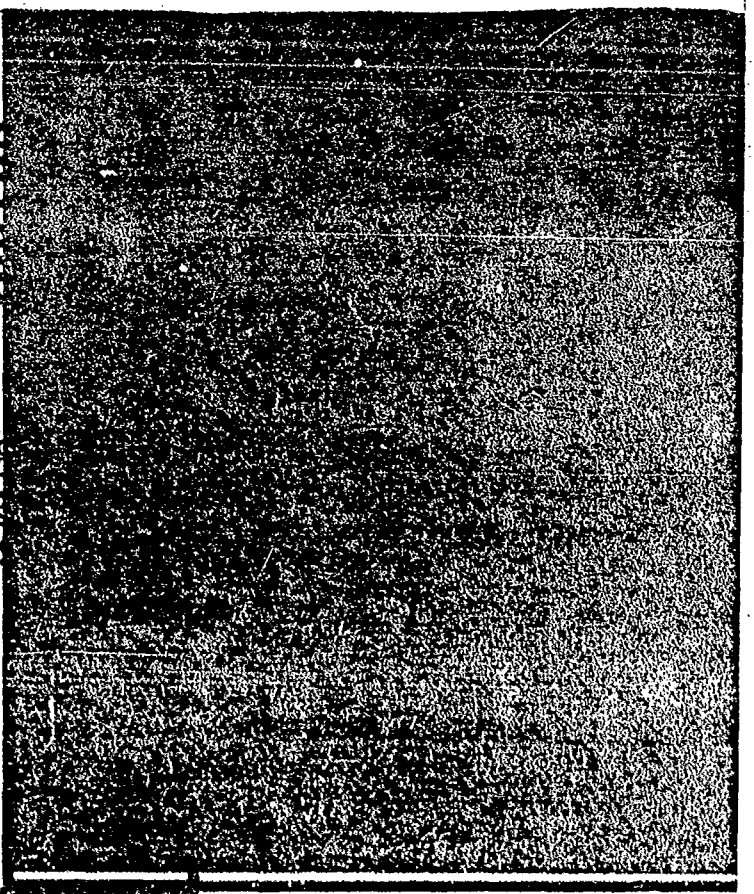

SPECIAL OPERATIONS RESEARCH OFFICE
THE AMERICAN UNIVERSITY
WASHINGTON 16, D.C.

OPERATING UNDER CONTRACT WITH THE
DEPARTMENT OF THE ARMY

The Special Operations Research Office (SORO) of The American University, a non-governmental agency operating under contract with the Department of the Army, performs social science research in support of requirements stated by the Department of the Army staff agencies and other Army elements.

This study was initiated as part of a task sponsored by the Director of Special Warfare, Deputy Chief of Staff for Military Operations, Department of the Army. Comments and questions on this report are invited and should be addressed to:

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Task PSYGUIDE
Research Completed: June 1964

CULTURAL MEANINGS AND VALUES

A Method of Empirical Assessment

by

Lorand B. Szalay

Assisted by

Jack E. Brent

TASK PSYGUIDE

SPECIAL OPERATIONS RESEARCH OFFICE
The American University
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March 1985

FOREWORD

The present cold war has dramatically upgraded the importance of persuasive political communication as a tool for achieving political objectives. However, it is important to realize that intercultural political communication is considerably hampered by the complexity of the communication tasks and by the necessity of a variety of delicate cultural adjustments.

A critical condition for the success of intercultural communication is efficiency in eliciting predetermined audience reactions. This is not so much a function of power, length, frequency, or other physical characteristics of broadcasting; it is determined primarily by the audience-adapted content and form of messages. There is little chance to achieve appropriate understanding unless we are well acquainted with the frame of reference of our foreign audience. We must construct our message of verbal-symbolic material in a manner which is efficient in getting across a particular meaning. The composition of culturally adapted messages requires more than the knowledge of a set of do's and don'ts, and even the most thorough knowledge of the foreign lexicon will not reveal to us what a particular audience understands by capitalism, democracy, education, politics, etc.

SORO has gained considerable experience in the collection and organization of country-specific information required by the tasks of intercultural communication and psychological operations. SORO's country guides also provide a unique training tool for members of the U. S. Army as well as for other overseas personnel of the U. S. Government for working in and with foreign cultures.

A full realization of the importance of cultural adaption as the main prerequisite

of communication effectiveness and persuasiveness compels us to improve, update, and control the validity of our products, we are looking for research methods appropriate to draw on new, possible primary, sources of cultural information. The present report is the result of such experimental efforts. It presents the outlines of a new research approach.

The method under development seeks to provide empirically founded, objective information on the culturally characteristic foreign frames of reference. Special emphasis is placed on cultural understanding of certain key words used in intercultural political communication.

The presentation of the method required two reports. The present report characterizes the method and presents data obtained on three cultural groups. A following report will elaborate on technical details, analytic power, relationships to other tests and methods, etc.

Theodore R. Vallance
Director

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CHAPTER I. SUMMARY

The objective of this study is to develop experimentally a method for collecting and analyzing data on culturally specific thought patterns and verbal behavior in order to achieve more efficient and persuasive intercultural communication.

Intercultural communications and psychological operations require culturally specific audience information. The frame of reference of the audience, as determined by its culture, must be uppermost in the mind of the communicator if truly efficient communication is to be achieved. Accordingly, social science techniques are required which can provide culturally specific information (Chapter II).

Experimental tasks were designed to yield data on the cultural frame of reference with special regard to its basic elements: the verbal cognitive units, their meaning content and value components, and their characteristic interrelationships. The method developed in these experiments will be referred to as Associative Group Analysis. It is based on the use of free association tasks adjustable to topics of operational interest.

In the experiments, as a part of a larger battery, word association tests were administered to Korean, Colombian, and U. S. college students in the Washington, D. C., area (Chapter III). The different cultural groups gave

abundant and distinctly differing responses revealing clear and highly culture-specific meaning dimensions. This suggests that associative data provide a solid foundation for cultural analysis (Chapter IV).

To extract the cultural information inherent in responses, an analytic procedure was developed, based on three different approaches. First, the agreement or disagreement on the meaning of a particular word as understood by two cultural groups is measured. In this way it becomes possible to determine how much the U. S. and Korean groups agree or disagree on the meaning of any particular word, for example, communism (Chapter V). Second, a measure is derived by which the relatedness of two given words can be determined experimentally for any particular cultural group. Our data show that, by using this measure, we can explore such complex and operationally important questions as, "To what extent are communism and socialism connected in the Korean mind?" Similar data may be obtained on the U. S. frame of reference, and a comparison of the U. S. with the Korean makes evident important differences (Chapter VI). Third, content is analyzed. The responses of any group to the word communism allow us to determine the collective meaning of this word for the group. The analysis focuses on the main components characteristic of the cultural meaning of the word. The capability to determine the collective meaning of such abstract, evasive, but politically highly important ideas is of considerable operational usefulness in efforts to adjust communication to a foreign audience (Chapter VII).

In order to give a more concrete example of the analytic inferences possible with Associative Group Analysis, the results obtained with the word capitalism are elaborated in more detail. The results reveal that the meaning of capitalism is different for the three cultural groups. For the

U. S. group capitalism has a primarily economic-financial content; for the Korean group its social and political aspects outweigh the economic; for the Colombian group capitalism has a strong economic as well as social-political emphasis. Furthermore, for the Korean group the meaning of capitalism is more abstract and theoretical, whereas for the U. S. and Colombian groups it is more concrete and product related.

The type of person the various groups identify with capitalism was also explored. The tendency to identify persons with capitalism is especially strong on the part of the Korean group. At the same time, they seldom refer to actual persons, but to social roles and general characteristics (an additional indication of the primarily abstract and theoretical thinking of this group). On the other hand, although the U. S. group makes decidedly fewer references to people, the references are more concrete, and they refer predominantly to reputable economists.

It was also possible to determine which nations the various groups identify with capitalism. The U. S. and the Korean groups gave considerable attention to this aspect of capitalism. The responses of both groups center heavily on the United States, identifying it as practically the only representative of capitalism. The Colombian group gave fewer responses, but they mentioned Russia to almost the same extent that they mentioned the United States.

An important dimension of meaning is the positive or negative valuation of a word. The Associative Group Analysis provides this information by revealing not merely positive or negative attitudes but also the main cultural values inherent in the evaluation.

The U. S. group placed a positive value on capitalism, emphasizing concern for freedom and privacy. Responses of the Colombian group were more balanced, highlighted by references to large size and wealth in the positive dimension and by poverty and inequality in the negative view. The Korean attitude is overwhelmingly critical, with special emphasis on these same negative values.

The data reveal many additional details concerning the cultural perception and meaning assigned by the different groups to capitalism (Chapter VIII).

All of the other 47 words used in the experiments give similar group-specific information when analyzed by the technique of Associative Group Analysis.

The results suggest that the approach may be successfully adapted to operational needs and interests and that it will prove useful as a data collection method, increasing quality and coverage of country-specific psychological operations handbooks. Since locally available foreign groups may be used for obtaining a great deal of general cultural, societal, and symbolic information in support of the various country assignments, qualitative improvements become possible without substantial budgetary increase. Furthermore, Associative Group Analysis provides a yardstick useful for the selection of consultants and for other methodological improvements.

Although Associative Group Analysis is already easily applicable in professionally conducted field research tasks, further efforts will develop a simplified data collection method for routine operational purposes. Associative Group Analysis promised to be useful in a wide variety of cross-cultural and intergroup research objectives of both scientific and operational relevance and in preparing genuinely persuasive intercultural political communications (Chapter IX).

CHAPTER II. PURPOSE OF RESEARCH

Background

The U. S. Army's intensive interest in effective communication with foreign nations is a result of its increasing range of activities and involvements. World-wide political and military commitments dictate the presence of large numbers of U. S. military personnel in culturally alien environments. These people must advise, teach and lead both individuals and groups. The success of their efforts depends on the effectiveness of their contacts. In turn, this contact effectiveness depends upon communication effectiveness. The advantages that our military personnel may take of their outstanding skills and weaponry in a foreign environment may often depend on the amount of genuine understanding established with indigenous colleagues and audiences. Military authorities charged with counterinsurgency operations and antiguerrilla warfare realize that achievement of their mission is not so much a matter of weapon superiority as of establishing efficient communication with broad segments of the population.

Elvis J. Stahr, former Secretary of the Army, spells out clearly this up-to-date orientation: "To prepare properly...military representatives of the United States abroad, we need far more than military specialities. We need to know intimately the peoples and their habits of mind, the languages, the customs and how best to approach each individual problem. The research and

compilation of all the information we need is beyond the capabilities of the Army."[1]

In the military context, there is a great variety of operational interest, with emphasis changing from task to task. The problems range from those involved in psychological operations to those faced by military advisory missions and from those of counterinsurgency to those of training assignments. The many types of operations and the unusual labels should not be allowed to obscure the basic common problem: intercultural communication.

A product of these recent intercultural communication requirements is PSYGUIDE, a research effort developed by SORO in response to country-specific information needs of the U. S. Army in connection with psychological operations. In this research task SORO compiles symbolic and cultural information necessary to the conduct of successful overseas propaganda and other types culturally adapted communication efforts. For this series of studies, communications has been defined broadly. It includes not only mass-media persuasion but also personal contacts and face-to-face communications.

The country guides have broad coverage. They provide country- and culture-specific information on social structure and social relations and elaborate on characteristics of important social groups, their roles, sensitivities, potential influence, etc.

An important section of each report deals with general communications information on the use of mass media, including pictures and maps, and interpersonal communications such as word-of-mouth, entertainment, and public speeches.

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1. Elvis J. Stahr, The U. S. Army's Limited War Mission and Social Science Research Symposium (Washington, D. C.: Special Operations Research Office, 1962), p. 8.

Attitudes and values bearing upon communication as well as such specialized topics as vulgarities, gestures, and stereotypes are also examined. They provide a unique training tool for working in and with foreign cultures and offer guidance and information on many aspects of intercultural communication.

The information incorporated in country guides is obtained by using a systematic research procedure and working directly with consultants who themselves have lived and worked in a given society. This procedure develops information and insights not generally available in area literature and maximizes the operational pertinence of the material. However, it has certain natural limitations. Although U. S. consultants can be trusted to give information honestly, there are categories of information, particularly in respect to indigenous values, meaning, and thought patterns, in which their information cannot be accepted without appropriate validation. Although they may have spent many years in the society under study, foreigners can hardly know the specific patterns of thought which can result in actions or attitudes so different from those which could be expected in our own culture.

Although it is simple and economical to draw on the knowledge of U. S. consultants, the requirements of thorough cultural adjustment and persuasive effectiveness dictate the increase of research capabilities in obtaining first-hand cultural data required by various overseas communication tasks.

The need of specific current information led to the formulation of a methodological subtask, PSYGUIDE-METHOD, with the express objective of improving research capabilities in collecting symbolic and other culturally relevant information about foreign peoples for the purpose of effective intercultural communication and psychological operations.

OPERATIONAL REQUIREMENTS

Complementary Information

The accumulated knowledge of U. S. scholars and area experts is the most important data source for intercultural communication efforts. It is hard to anticipate a future stage of methodological development in which the priority of consultant data contribution may be seriously challenged. Nevertheless, appropriate methods are needed to supply primary cultural data, not as a substitute but as a complement to consultant information. The highly specific character of the information needed, the limited availability of knowledgeable consultants, contradictions in consultant opinions, the rapid rate of social and cultural change, and outdating of recent personal experiences require us to find methods of drawing information from primary cultural data sources.

Consultants are usually a less expensive source than field research for gathering information relevant to political communication. However, this may change if simple but efficient research methods are developed to cover several aspects of intercultural political communication simultaneously. Such methods could take advantage, for instance, of the foreign student population at nearby universities. The number of foreign students registered at U. S. universities this year exceeds 40,000. With research methods available, these students offer an excellent opportunity to obtain communication-relevant cultural information.

Efficiency of Consultant Utilization

The consultant approach requires that special attention be paid to the problems of validity control and to methodological improvements. As the overwhelming majority of our consultants are U. S. citizens, special attention

must be paid to the elimination of possible U. S. cultural biases. To check on or correct for these cultural biases, occasional recourse to primary cultural data is required.

There are many uses for primary cultural data. This material can be used to explore the degree of cultural-societal expertise on the basis of objective criteria. The quality of the consultants heavily influences the quality of the single country guides. Primary cultural data can also be used in validity control, settling differences and contradictions in consultant opinions, etc.

Simplified Operational Field Research Technique

Finally, the method promises to provide opportunities for the development of a simplified version that can be used by the psychological operator in the field. Since the present PSYGUIDE data collection method is based on consultant information, it is also important to explore new methods that would be applicable when sufficient U. S. consultants for an area are not available. In the present short-of-war situation, characterized by increased U. S. Army responsibilities and presence in many countries, the army psychological operator may increasingly be in the field in a relatively peaceful situation. If he has the appropriate method of data collection, he can obtain the specific cultural and social information needed. It is impossible to foresee psychological operations needs for all situations, but if equipped with appropriate methods of data collection, the psychological operator could collect data personally in the field.

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NEW METHODOLOGICAL ORIENTATION

The highly specific and delicate nature of political communication requires authentic and up-to-date cultural information. This creates a need for new techniques of cultural data collection and audience analysis. Since only few of the presently available social science techniques can effectively contribute to the complex tasks of intercultural political communication, there is an emphatic demand for new and sensitive techniques of cultural data collection and audience analysis.

The adaption of communication to the audience is a generally accepted principle; however, the practical adjustment represents a problem far beyond the present capabilities of psychology and social science. It is not enough to learn long lists of cultural do's and don'ts as specified by area experts and anthropologists. For effective political communication the requirements of cultural adaption are much more complex and fundamental.

The difficulty can be demonstrated by comparing intercultural with intracultural communication requirements. When designing messages for an audience of our own culture we can be fairly safe in projecting our own thoughts and feelings on the subject at issue. Thus our own frame of reference may be of help in selecting appropriate arguments and statements attacking the issue at its most crucial and vulnerable points.

The situation is vastly different with culturally alien audiences. People of various cultures perceive, relate, interpret, understand, and evaluate a particular issue, for example, socialism, very differently. For foreign audiences the content of this issue (that is, political, social, moral, economic) is often different from that understood in the United States.

As Ralph White demonstrates, the content attributed to socialism by different peoples varies greatly.[2] According to his data, collected in a large variety of foreign countries, there are people for whom socialism means primarily state ownership; for others, it means private ownership but with social services provided by the state; for others, it implies state control instead of private enterprise.

Data on foreign attitudes to particular issues is only a part of the information necessary to achieve effective communication. Data on foreign attitudes is of use only if the background of the issue is well understood. It is not enough for a psychological operator to know that a particular group achieved a moderately positive attitude score on a particular issue; it is also vital to know which particular cultural values are inherent in and represented by this attitude. It is hardly possible to achieve attitude change unless the communication is efficiently geared to the underlying values. It is also obvious that, for example, the issue of socialism may require a substantially different approach by the psychological operator if he finds out that his audience identifies socialism primarily with England and Sweden rather than with the Soviet Union or Communist China.

Persuasive intercultural communication is hampered unless the communicator is knowledgeable about the nature and extent of such differences. Such premises call for additional research methods and data collection techniques to supply primary data on the frame of reference of the target audience (culturally and ecologically conditioned perception, denotative meaning content, cognitive organization, value orientation, etc.).

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2. Ralph White, The Semantics of Socialism and Capitalism (Research Report R-64-64; Washington, D. C.: United States Information Agency, 1964).

THE ASSOCIATIVE APPROACH

The present experiments attack this problem by using verbal associations. The particular experimental approach was selected on the assumption that free verbal associations reflect cultural experience in the form of culturally conditioned verbal-cognitive processes. To the extent that they are culture specific, it is reasonable to assume that free associations obtained from culturally homogeneous groups may yield information on the organizational and functional characteristics of the culturally conditioned frame of reference.

Several recent studies[3] indicate that verbal associations can be used to explore the relatedness of various verbal stimuli. Thus the research method Associative Group Analysis was designed, based on culturally specific associative responses elicited by selected verbal stimuli. The resultant group responses were subjected to various analytic procedures for extracting cultural information on the specific content and culturally conditioned interrelationship of verbal stimuli. The experiments were organized to explore the validity of three basic assumptions. (1) Associative responses obtained from persons of different cultural backgrounds differ and yield lists of group responses distinguished by culture-specific characteristics. (2) The culture-specific

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3. C. N. Cofer, "Associative Commonality and Rated Similarity of Certain Words from Haagen's List," Psychological Report, 3 (1957), 603-606; J. Deese, "Form Class and the Determinants of Association," Journal of Verbal Learning and Verbal Behavior, 1 (1962), 79-84; Deese, "Influence of Inter-Item Associative Strength upon Immediate Free Recall," Psychological Review, 69 (1962), 161-175; and B. E. Garskof and J. P. Houston, "Measurement of Verbal Relatedness: an Idiographic Approach," Psychological Review, 70 (1963), 277-288.

verbal associations not only represent cultural verbal habits, but also reflect culturally characteristic perceptions, cognitive organizations, and value orientations, that is, basic features of the cultural frame of reference. (3) When analyzed these culture-specific verbal associations will yield concise cultural information, focused on predetermined areas.

CHAPTER III. DESCRIPTION OF EXPERIMENTS

The experiments were designed to compare three cultural samples (United States, Korean, and Colombian) on a variety of associational and other psycholinguistic tasks. Although the experiments deal with culturally related group differences, the subject matter of this study is not the substance and broad cultural relevance of these differences; it is rather the usefulness of associative and other techniques for tracing and measuring such differences.

SUBJECTS

Subject groups belonging to distinctly different cultures were selected. In view of the great cultural distance separating the groups, each group could be regarded as culturally homogeneous. Three groups were used in order to allow multiple comparisons. Similarity in terms of educational level, social status, and sex distribution was a criterion in the selection of the subjects. The availability of the necessary numbers also represented an important practical condition.

Fifty United States students, fifty Korean students, and fifty Colombian students were chosen, based on such considerations. Each sample was composed of an equal number (25-25) of men and women. The students came from the different universities in the Washington, D. C., area.

EXPERIMENTAL TASKS

A series of tasks was administered to the U. S. subjects in a single session and to the Korean and Colombian subjects in two separate sessions. In the first of the two sessions the tasks were given in the native language. The second session was set up 1 week later in order to administer the same tasks to the

foreign students in English. Two of the tasks were associative (free and partially controlled association), and two were psycholinguistic tasks (semantic differential and similarity judgments) of cross-cultural relevance.

FREE ASSOCIATION EXPERIMENTS

This report is based exclusively on the data yielded by the free association tasks administered in the native language in written form on cards. A stimulus word was printed on the top of each card and the subjects were asked to write their responses on the empty lines below. The same stimulus words were presented to all subjects but in different, random order. The subjects were given 1 minute for each stimulus word, and the following instructions were given in English and in Korean and Spanish translation.

Instruction I

This is one of the studies in verbal behavior. This particular experiment is on free association.

You will find a word printed in capital letters on the top of every card. Reading this stimulus word will make you think of other associated words (objects, ideas, issues, etc.). You are asked to write the words as they occur to you on the empty lines beneath the stimulus word. Write as many response words as you think of in 1 minute. The experimenter will indicate the end of each period.

At the end of each minute, you will be asked to estimate the number of response words you could give if another 4 minutes were given to you for this purpose. In the lower right corner of each card a line is supplied where you may write the figure of this estimate. After you give this approximate

figure, you are to turn to the next word.

It is important that in giving your responses you always take the given stimulus word into consideration. For example, if the stimulus word was table and your answer was writing, in giving the subsequent responses you have to refer back to table and avoid chain responses (writing, pen, ink, blue, ocean, sail, etc.).

Please work without hurrying, but do your best to give us as many answers as possible. Do not select your responses, but put them down in sequence as they occur to you.

Stimulus List

The stimulus list was composed of 48 stimuli, representing 4 main areas and 12 reference spheres. Each area included 3 different word categories: adjectives, nouns, and verbs (see table 1). Different word categories were used because technical literature indicates that various word categories have differing effects on associative responses.

The single stimuli were selected arbitrarily, and there were only two considerations influencing their choice. The words had to fit into the categorial system outlined, and the selected words had to have approximately corresponding equivalents in Korean and Spanish as attested to by the bilingual experts consulted. It was a further objective to include one item characterised by highly culture-specific meaning (for example, rice or to bow) in each of the first nine tetrads.

Numerical Estimates

For two purposes, the subjects were asked to estimate the number of responses to each word they could produce if allowed to work 5 minutes instead

of 1 minute. One was to obtain an additional measure of meaningfulness based on familiarity rather than availability of vocabulary; the other was to free the subject from the mental set created by the previous word and prepare him for the next one. The approximate character of this estimate was emphasized, and only 1 or 2 seconds were given for the answer. The cards prepared for the experiment were of a convenient size for a column of single words. This induced the subjects to write responses on successive lines and facilitated assessment of the response sequence. Theoretical and technical details primarily of professional psychological interest are included in annex A.

Table 1. Stimulus List

Area and Reference Sphere*	Stimuli		
	Adjectives	Nouns	Verbs
Human Needs			
I	Hungry	Rice Food	To eat
II	Thirsty	Water Well	To drink
III	Poor	Money Beggar	To desire
Family and Education			
IV	Educated	School Knowledge	To learn
V	Polite	Greeting Manner	To bow
VI	Filial	Family Ancestors	To respect
Morality and Religion			
VII	Proud	Honor Offense	To revenge
VIII	Moral	Lie Sin	To condemn
IX	Immortal	Faith Heaven	To worship
Economic, Social and Political			
X	Financial	Business Capitalism	To trade
XI	Social	Equality Socialism	To cooperate
XII	Political	Power Communism	To rule

*Reference spheres are indicated by roman numerals.

CHAPTER IV. NATURE AND CULTURAL RELEVANCE OF RESPONSE LISTS

The previously described association experiments yielded a large number of responses from each subject group to each stimulus word. With 50 subjects in each cultural group and with 1 minute allowed for each stimulus, the response lists averaged over 300 responses. (see Parameters of Group Response Lists, annex B).

A simple way of presenting the group response material is to order the responses obtained from a given group on the basis of response frequencies or response scores. Response scores are numerical values which reflect the frequency of a particular response and its rank (first, second, etc.) in the sequence of responses. Experimental evidence indicates that the rank place of associative responses represents differences in relative importance (see Scoring System and Its Theoretical Rationale, annex A). For this reason response scores provide more precise information than simple frequencies, and preference was given to response scores over frequencies throughout the analysis.

Generally speaking, responses with high response scores or high frequencies are words of great importance, that is, words closely related to the stimulus word (see Associative Content and Priority Patterns, annex A). Since the responses are many and varied and since each response has a distinct priority reflected by its frequency or response score, the response lists are rich sources of information on cultural priorities. When the lists of responses from the three subject groups to the same stimulus word are compared, distinct differences appear. For example, in the responses to the first stimulus word, hungry, the Korean list is headed by: cooked rice, beggar, food, poverty, rice and money; the U.S. list by: food, eat, thirsty, starve, stomach, and poor; the Colombian list by: meal, food, hunger, poor, beggar, and poverty (see table 2). Already, the first response, cooked rice, distinguishes the Korean list in a highly significant degree from the response lists of the Colombian and U.S. groups, which do not contain the response cooked rice at all.

A brief comparison of the lists reveals that the groups with different cultural backgrounds give distinctly different responses.

The word hungry was used as an example solely because it was the first word on our stimulus list. The other 47 words generally show similar differences between cultural groups. (For a more complete idea of the specific character of the response material obtained, see Comparative Group Response Lists, annex B.)

Responses to the same word, obtained from the three groups, in all cases show statistically significant differences. Annex A (Statistical Significance of Associative Data) elaborates on the problem of statistical significance and presents figures on the size of interlist differences which cannot be explained as a matter of chance. If differences obtained are larger than we could expect by chance, once in a hundred cases, it is customary to speak of statistically highly significant differences.

In the case of intergroup differences, high statistical significance implies that a response is specific to the particular group, distinguishing it from the other group. Since culturally different groups are being compared, group specificity implies culture specificity. The group response lists give long series of responses which are culture specific, distinguishing the three groups in respect to many responses.

Furthermore, a closer look reveals that the response lists are characterized by specific interrelationships of responses. For example, in the Korean responses to hungry, rice precedes meat, bread precedes desserts, etc. Each response list is characterized by a large number of such distinct, statistically significant intralist priority patterns which give information about the culturally specific response priorities in respect to each stimulus word (see Statistical Significance of Associative Data, annex A). As has already been noted, the culture specificity of the

Table 2. Associative Group Responses to Hungry

U.S.			Korean			Colombian		
Responses	RS	RF	Responses	RS	RF	Responses	RS	RF
Food	220	44	Cooked rice	107	23	Meal	107	21
Eat	76	20	Beggar	100	22	Food	73	15
Thirsty	61	12	Food	51	13	Hunger	65	13
Starve	59	14	Poverty	46	9	Poor	59	14
Stomach	52	14	Rice	44	11	Beggar	43	12
Poor	43	12	Money	40	12	Poverty	38	11
Pains	27	6	People/Person	35	7	Money	36	10
People	18	5	Poor	28	6	Bread	35	9
Famished	18	5	Pitiful	27	7	Starving	29	5
Needy	17	4	War	26	8	Thirsty	29	6
Diet	16	4	Child(ren)	23	5	Work	27	7
Meat	15	5	Orphan(s)	22	5	Necessity	18	6
Child(ren)	15	4	Hunger	14	3	Desperate	17	4
Money	14	4	Eat	13	4	Thin	17	6
Always	14	3	Time	12	4	Man	15	3
Cake/Pie	12	3	Stomach	11	3	Miser	13	3
Tired	11	4	Meat	11	3	Rich(ness)	12	4
Help	11	3	Soup	10	4	Stomach	12	3
Communism	11	3	Sympathy	10	3	Meat	11	3
Cook	11	5	Poor people	10	3	Laziness	11	3
Beggar	11	3	Must eat	10	2	Fast	11	3
Desire	10	4	Life	10	2	Lack of appetite	11	2
Steal	10	3	Pain(ful)	10	2	Dog	11	2
Suffering	10	3	Underdeveloped	9	3	Death	10	3
Hunger	10	3	Headache	9	2	Lacking	10	3
Hurt	10	3	Our national race	9	2	Dessert	10	3
Hungary	10	2	Stomach ache	9	2	To eat	9	4
Satisfaction	9	4	Farmer(s)	8	3	Desire/Desirous	9	2
Drink	9	3	Bread	8	3	Without food	9	2
Cafeteria	9	3	Sad(ness)	8	2	Weakness	9	2
Bread	9	3	Suffering	8	2	Skinny	8	3
Now	9	2	Laborer	8	2	Lack of food	8	2
Pangs	9	2	Human being	8	2	Need(y)(ed)	8	2
Breakfast	8	3	Sickness	7	2	Restaurant	8	2
Brazil	8	2	Lazy	7	2	Sad	8	2
Hamburger	8	2	Orphanage	7	2	Sick	8	2
Land	8	2	Restaurant	7	2	Unhappy	8	2
Poor people	8	2	Wealthy	7	2	Animal	7	2

Table 2. Associative Group Responses to Hungry

U.S.			Korean			Colombian		
Responses	RS	RF	Responses	RS	RF	Responses	RS	RF
Food	220	44	Cooked rice	107	23	Meal	107	21
Eat	76	20	Beggar	100	22	Food	73	15
Thirsty	61	12	Food	51	13	Hunger	65	13
Starve	59	14	Poverty	46	9	Poor	59	14
Stomach	52	14	Rice	44	11	Beggar	43	12
Poor	43	12	Money	40	12	Poverty	38	11
Pains	27	6	People/Person	35	7	Money	36	10
People	18	5	Poor	28	6	Bread	35	9
Famished	18	5	Pitiful	27	7	Starving	29	5
Needy	17	4	War	26	8	Thirsty	29	6
Diet	16	4	Child(ren)	23	5	Work	27	7
Meat	15	5	Orphan(s)	22	5	Necessity	18	6
Child(ren)	15	4	Hunger	14	3	Desperate	17	4
Money	14	4	Eat	13	4	Thin	17	4
Always	14	3	Tiee	12	4	Man	15	3
Cake/Pie	12	3	Stomach	11	3	Miser	13	3
Tired	11	4	Meat	11	3	Rich(ness)	12	4
Help	11	3	Soup	10	4	Stomach	12	3
Communism	11	3	Sympathy	10	3	Meat	11	3
Cook	11	5	Poor people	10	3	Laziness	11	3
Beggar	11	3	Must eat	10	2	Fast	11	3
Desire	10	4	Life	10	2	Lack of appetite	11	2
Steal	10	5	Pain(ful)	10	1	Dog	11	2
Suffering	10	3	Underdeveloped	9	3	Death	10	3
Hunger	10	3	Headache	9	2	Lacking	10	3
Hurt	10	3	Our national race	9	2	Dessert	10	3
Hungary	10	2	Stomach ache	9	2	To eat	9	4
Satisfaction	9	4	Farmer(s)	8	3	Desire/Desirous	9	2
Drink	9	3	Bread	8	3	Without food	9	2
Cafeteria	9	3	Sad(ness)	8	2	Weakness	9	2
Bread	9	3	Suffering	8	2	Skinny	8	3
Now	9	2	Laborer	8	2	Lack of food	8	2
Fangs	9	2	Human being	8	2	Need(y)(ed)	8	2
Breakfast	8	3	Sickness	7	2	Restaurant	8	2
Brazil	8	2	Lazy	7	2	Sad	8	2
Hamburger	8	2	Orphanage	7	2	Sick	8	2
Land	8	2	Restaurant	7	2	Unhappy	8	2
Poor people	8	2	Wealthy	7	2	Animal	7	2

Table 2. Associative Group Responses to Hungry

U.S. Responses	RS	RF	Korean	RS	RF	Colombian Responses	RS	RF
Death	7	3	Relief work	6	2	Dish	7	2
Unhappiness	7	3	Refugee	6	2	Scarcity	7	2
Socialism	7	2	Begging	6	2	Anxious	6	2
Poverty	7	2	Cold	6	2	Cold	6	2
Want	7	2	Tired	6	1	Fatigued	6	2
Health	6	3	Our country	6	1	House	6	3
Steak	6	2	Red China	6	1	Satiate oneself	6	2
128 additional responses	408	145	120 additional responses	407	122	110 additional responses	345	116
Totals	1,241	385		1,238	327		1,218	329

RS: response score; RF: response frequency

response material is especially important, since it represents the first and most basic requirement for the workability of the present approach.

General cultural relevance of the associative responses is another requirement for the utility of the associative group analysis. This approach explores differences in associations, that is, differences in verbal behavior. Cultural differences in the responses indicate that this approach reveals differences in verbal behavior and makes it possible to determine just how differently people associate words and how differently they speak.

Next to be considered is the question of whether these differences in associative pattern also indicate differences in cognition (perception, relation of ideas, conceptualization, evaluation, attitudes, etc.), in other words, whether associations also reveal specific patterns of thinking shaped by culture and ecology. Various approaches to exploring this question are possible. One approach is to administer parallel tests to obtain data on various aspects of culturally conditioned cognition and to compare these results with the data obtained by the free association method.

This approach of parallel tests was used in the original experimental design. A following report will present the results as soon as the evaluation of these simultaneously administered tests is completed.

To obtain immediate information, recourse was taken to faster, although less direct, methods. One approach is based on the consistency of the response material as revealed by stable, recurring intergroup differences and intragroup priority patterns. For example, responses with social and political connotations were consistently more frequent from Korean students than from the others, whether or not the stimuli were political, economic, or religious. In response to any stimulus word in the area of eating, meat is always the highest priority food in the U.S. responses, rice in the Korean, and meal in the Colombian. Such stable group

response characteristics, emerging consistently and independently of the particular stimulus word, suggest that not merely stimulus-conditioned verbal habits play a role but also more general cultural factors such as cultural experience.

In a different approach, two cultural anthropologists (Korean and Colombian area specialists) were asked to interpret the group response patterns to the stimulus words in reference sphere I. This sphere was selected because of its relatively concrete nature and verifiability. The task of cultural interpretation was limited to responses to a single tetrad because of the extensiveness of the responses obtained.

The area experts submitted long reports containing an analysis of responses with high frequencies and their cultural explanations (see Summaries of Cultural Experts' Opinions, annex A). They were in agreement that the associative group response lists were culture specific, that they have a broad cultural relevance, that they represent characteristic ways of thinking, and that they genuinely reflect the experience and milieu of the subject groups.

CHAPTER V. INTERCULTURAL ASSOCIATIVE AFFINITY OF WORDS

Although there is no doubt that the responses are culturally specific and have relevance, the response lists supply so many details that their use creates further problems. Comparing two lists involves working with 200-300 words. Such comparisons lead to a long series of item-by-item observations which are cumbersome to handle and difficult to summarize. Thus it is important to find appropriate methods for comparing and analyzing response lists and providing information meaningfully organized to satisfy our interest.

The first point of interest is how similar or how different is the associative meaning of a particular word (for example, communism) to two cultural groups (for example U.S. and Korean). The problem of associative similarity can be conveniently approached by the rationale that associative similarity or verbal relatedness depends on the relative amount of associations in common. Adopting this rationale, supported by many investigators of verbal behavior, and adjusting it to problems of intercultural comparisons, it becomes possible to measure the degree of their common understanding in respect to the presented word. If the U.S. and Korean groups give a large number of identical responses to the word communism, it indicates that they have a similar understanding of the word communism, more similar than if they give a small number of identical responses.

The identical responses or associations in common can be conveniently referred to as overlapping associations -- from the images in figures 1-30. The greater the overlap in the associations, the more closely related are the associative meanings of a particular stimulus word for the two groups under study. Associative similarity, implying a relatedness based on the relative number of associations in common, has a meaning which is different from the common meaning of similarity. To make this difference clear and to avoid misunderstanding, the concept of associative affinity was introduced. This concept is based on the idea of associative relatedness and is

adjusted to the requirements of cross-cultural comparisons. With indexes of intercultural associative affinity, it is possible to determine the degree of associative affinity between the U.S., Korean and Colombian group responses in connection with various stimulus words.

The meaning of these index figures may be explained by the following example, based on the first part of figure 1, which indicates the associative affinity of the U.S. and Korean responses to the word food. (The affinity formula presented in Concept of Associative Affinity, annex A, is used.) The U.S. group achieved a total score of 1,453, the Korean group a total score of 1,189. Their associations in common amounted to a score of 402. To calculate the affinity of U.S. associative responses to Korean responses, the score of associations in common, 402, is divided by the total score of U.S. responses, 1,453. The division is continued through the third decimal, and, in order to avoid decimals, the three-digit quotient is multiplied by 1,000. To calculate the affinity of the Korean associations to the U.S. associations, the score of the associations in common, 402, is divided by the total score of the Korean associations, 1,189.

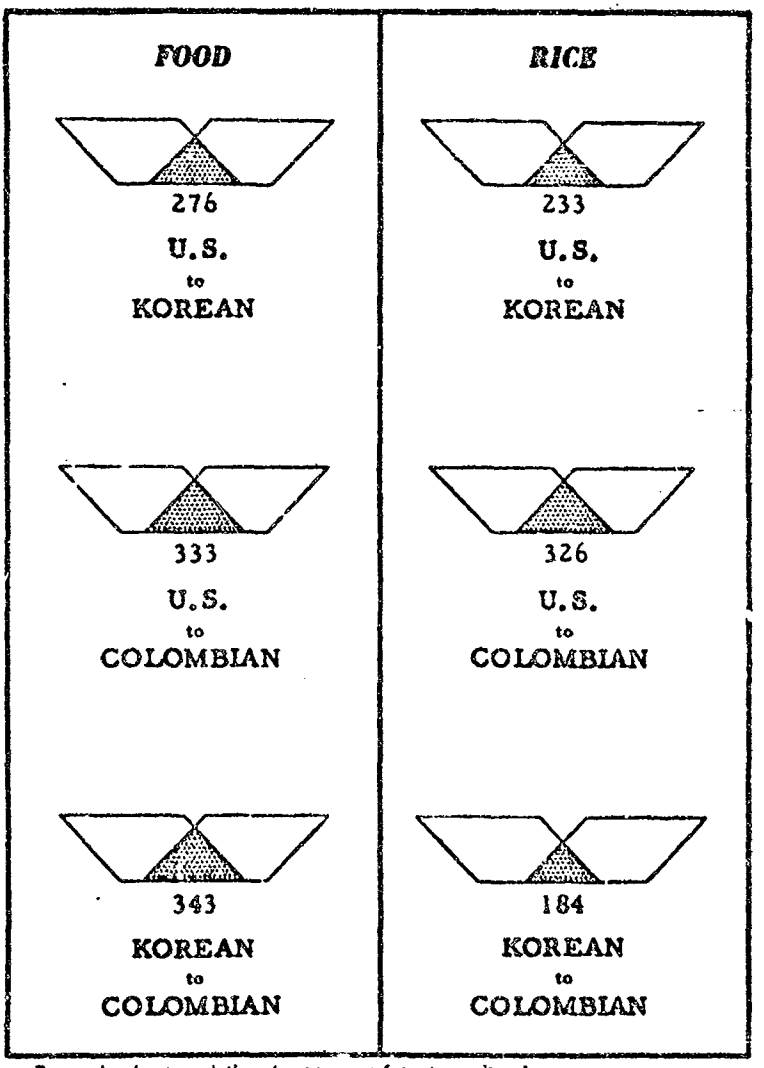
Since most indexes of intercultural associative affinity lie between 100 and 500, indexes over 400 may be considered as relatively high, and indexes below 200, as relatively low. Accordingly, high indexes of intercultural associative affinity (over 400) indicate extensive communality of reactions, that is, a high degree of cultural communality of the stimuli. Low indexes (below 200) indicate large differences in the cultural response patterns, that is, high culture specificity. (See Indexes of Intercultural Associative Affinity, annex B, for indexes based on native language associations.)

Figure 1 presents the associative affinity of cultural responses to food and rice. The indexes are in all instances higher for food than for rice, indicating that food has a higher cultural generality than rice. This is in agreement with the observations of the cultural experts emphasizing the unique cultural importance of rice for the Koreans. In respect to rice, the indexes indicate that the U.S. to Colombian affinity is the highest and the Korean to Colombian affinity is the lowest.

Figure 2 presents the associative affinity in responses to educated and school. The indexes for educated show a generally low level of affinity, indicating that this word is highly culture specific, and the greatest cultural differences exist between the Korean and Colombian uses of this term. (See chapter V for methods explaining the nature of these differences in more detail.) In contrast to educated, school is distinguished by a high degree of cultural generality in respect to all three cultural groups. Of all the 48 words studied, school shows the highest amount of intercultural affinity. This finding can be better comprehended by realizing that subjects were student groups, characterized by their participation in higher education which by its very nature is universal. A further point is that these students have the common characteristic of studying at U.S. universities.

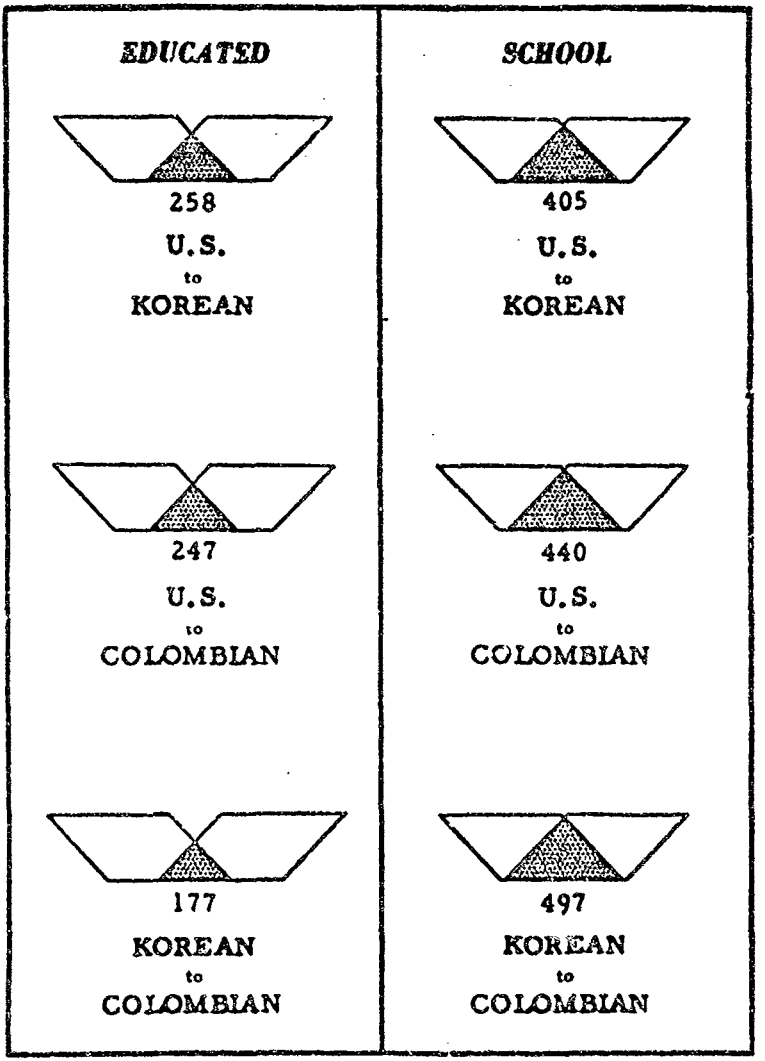
Figure 3 presents the associative affinity of responses to political and communism. Political is fairly culture specific, revealing the largest differences in cultural interpretations. The U.S. to Colombian comparison shows more similarity than the two other comparisons represented. With communism, the three cultural groups show substantially higher affinity. This finding also may be substantially influenced by the fact that subjects were university students.

There are two obvious limitations inherent in this approach. First, it involves double translations: the translation of the stimulus words in order to obtain equivalent stimuli for groups with different language backgrounds (discussed in Translation



By overlapping associations in responses from two cultural groups to the same word. Numbers are indexes of intercultural associative affinity.

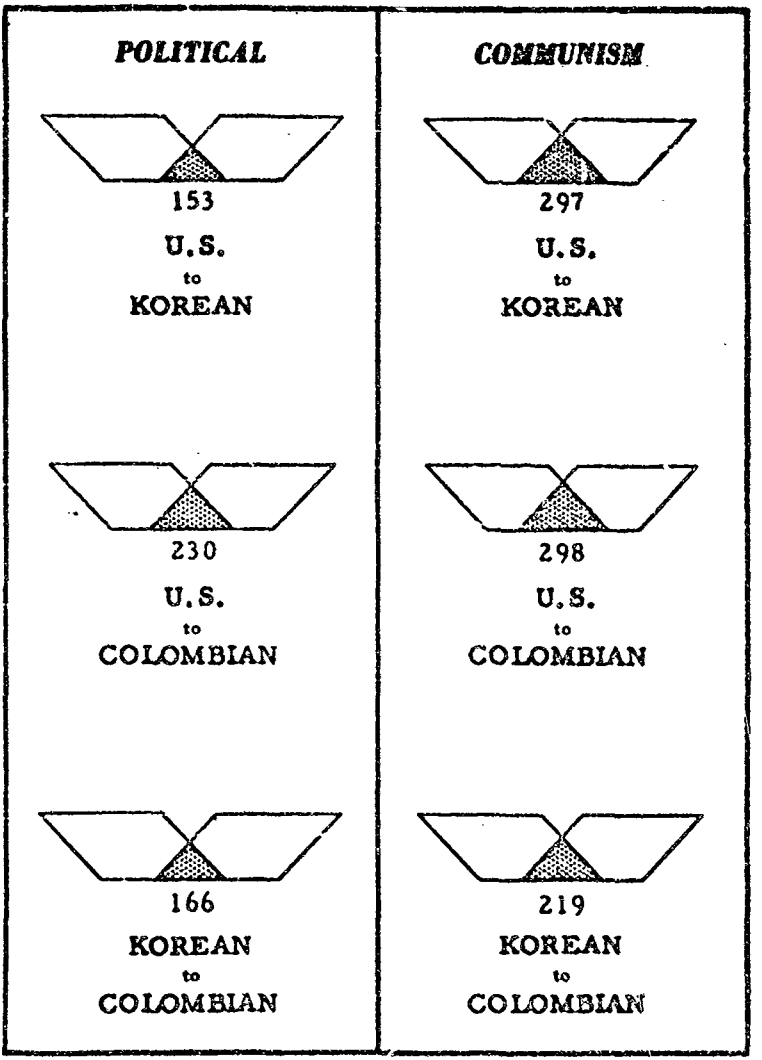
Figure 1. Associative Affinity of Three Cultural Groups to Food and to Rice



By overlapping associations in responses from two cultural groups to the same word. Numbers are indexes of intercultural associative affinity.

Figure 2. Associative Affinity of Three Cultural Groups to Education and to School

and Equivalent Stimulation, annex A) and a translation of the responses to determine the effective amount of overlap. Translation is a source of errors, even if efforts are made to keep them to a minimum. Second, this approach, although efficient in quantifying the relative amount of cultural differences, does not help to identify the nature of these differences.



By overlapping associations in responses from two cultural groups to the same word. Numbers are indexes of intercultural associative affinity.

Figure 3. Associative Affinity of Three Cultural Groups to Political and to Communism

CHAPTER VI. ANALYSIS OF CULTURALLY CHARACTERISTIC RELATIONSHIPS OF WORDS

In order to obtain more specific and detailed information about the culturally characteristic meanings of words, an approach was developed to analyze the relationships between responses to different words. Several researchers have demonstrated recently that associative response material may be efficiently used to determine what Garskof calls "verbal relatedness" and Deese, "associative meaning."[4] These measures are based on the proportion of associations in common and were successfully used to explore the interrelationship of various English words.

Associative affinity is based, as already discussed, on the relative amount of overlapping associations. This concept permits the measurement of the interrelationship of words based on their associative responses. In Chapter V the interrelationship of responses obtained from two or more culturally different groups (for example, U. S. and Korean) to the same verbal stimuli (for example, food) was measured. This concept is also applicable to the measurement of the interrelationship of two words (for example, hungry and poor) in respect to a particular group or culture. Both hungry and poor elicit a series of associations, and the relative amount of their associations in common may be used to determine their associative affinity in respect to the particular group. Thus may be obtained intracultural associative affinity indexes delineating the interrelationship of a set of stimulus words for any particular culture. Such indexes specifying the interrelationship of hungry, food, and poor in one culture (for example, U. S.) and a similar set of indexes for a different

4. B. E. Garskof and J. P. Houston, "Verbal Relatedness," Psychological Review, 70 (1963), 277-288; J. Deese, "Form Class," Journal of Verbal Learning and Verbal Behavior, 1 (1962), 73-84; and J. Deese, "Influence," Psychological Review 69 (1962), 161-175.

culture (for example, Korean) make possible a systematic tracing and evaluation of intercultural differences.

Indexes were calculated on various combinations of stimuli (see Indexes of Intracultural Associative Affinity, Annex B). It was assumed that the cultural patterns of associative affinity would show differences in agreement with well-known cultural facts. It was assumed, for instance, that the importance of rice for the Korean culture would reflect in high indexes showing close affinity between rice and other food-related words.

Figure 4 shows the associative affinity of the word rice to three other words: hungry, food, and to eat. The highest level of relationship is obtained for the Korean group, and the lowest, for the U. S.

Figure 5 presents the associative affinity indexes obtained from hungry and three other words with economic-financial connotations. In the associative affinity of hungry to poor, and to beggar, the three cultural groups show considerable variation: the affinity is the lowest for the U. S. group, and it approximately doubles for the two foreign groups. These impressive differences imply that in the two foreign countries, having considerable poverty, hunger is related much more to conditions of want than in the United States.

Figures 6 and 7 give the cultural associative affinity of the word educated to words from two different reference spheres. The words in figure 6, school, knowledge, and to learn, refer primarily to the intellectual, formal aspects of learning as assimilation and storage of information. The words in figure 7, filial, ancestors, and to respect, make strong references to certain family-related values and principles.

With the words in figure 6, educated shows variable patterns of associative affinity: high affinity for the U. S. group and a generally low affinity

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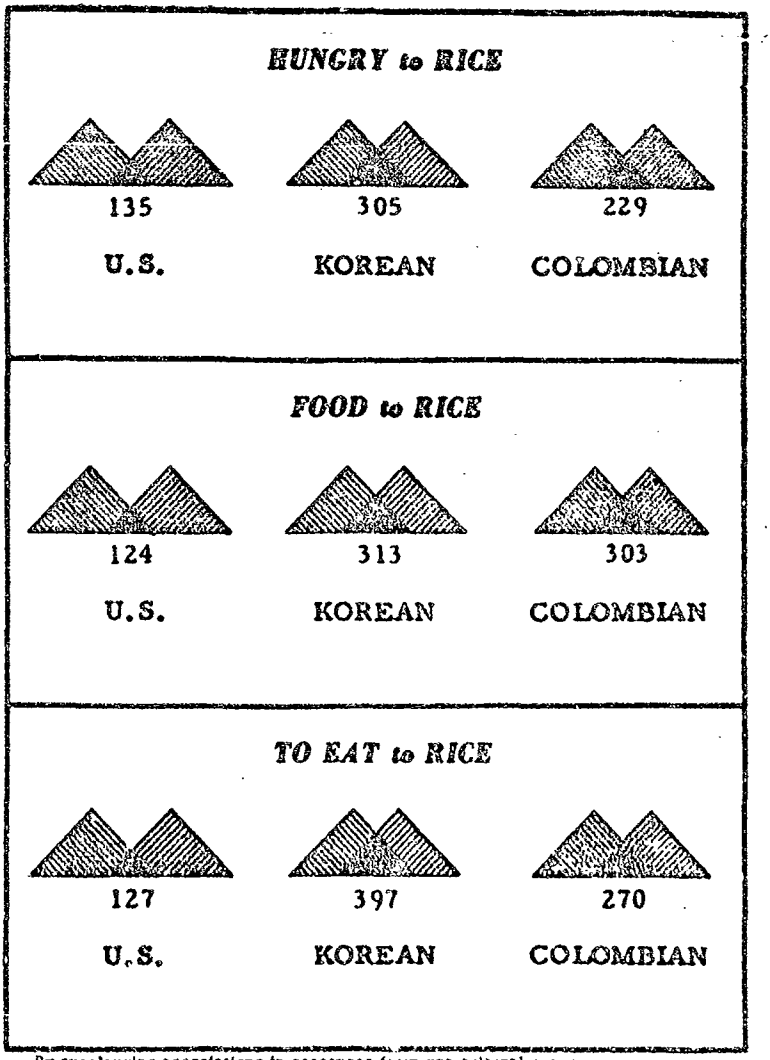
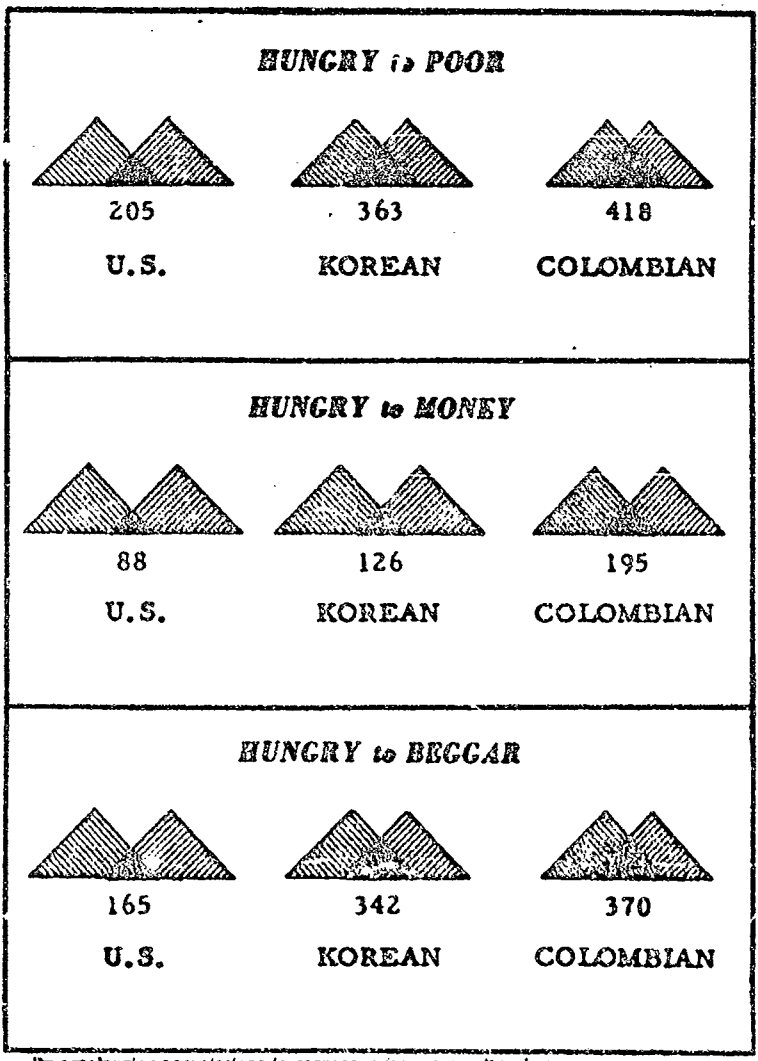


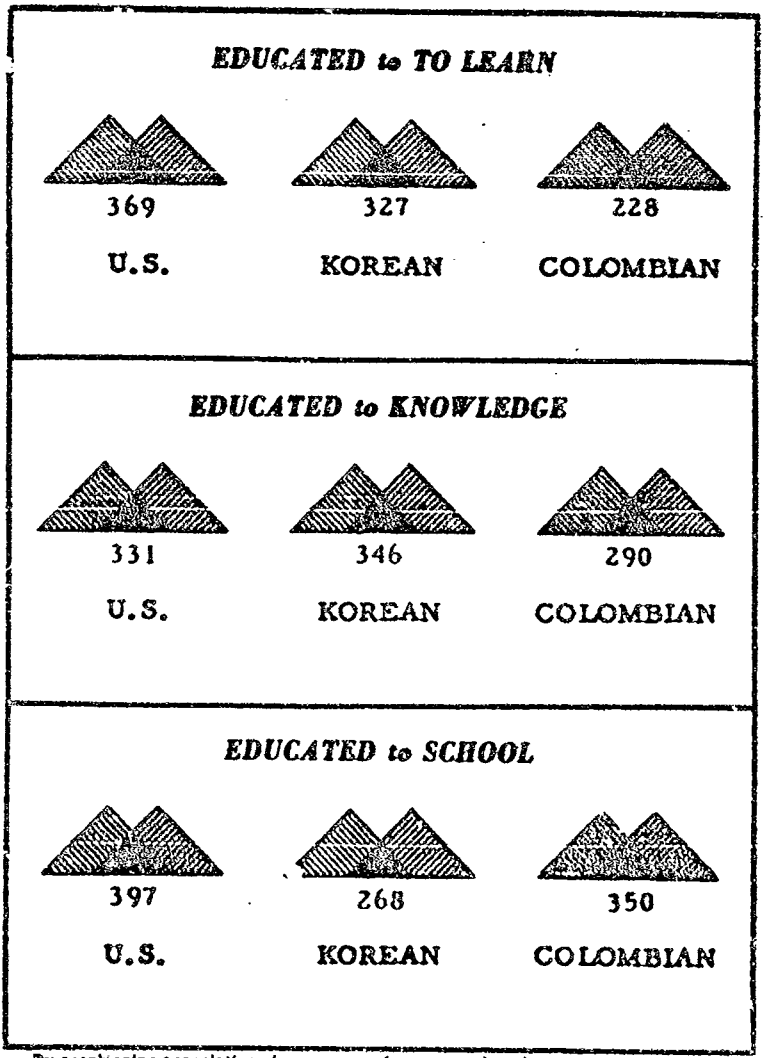
By overlapping associations in responses from one cultural group to two words. Numbers are indexes of intracultural associative affinity.

Figure 4. Intracultural Associative Affinity of Three Words to Rice



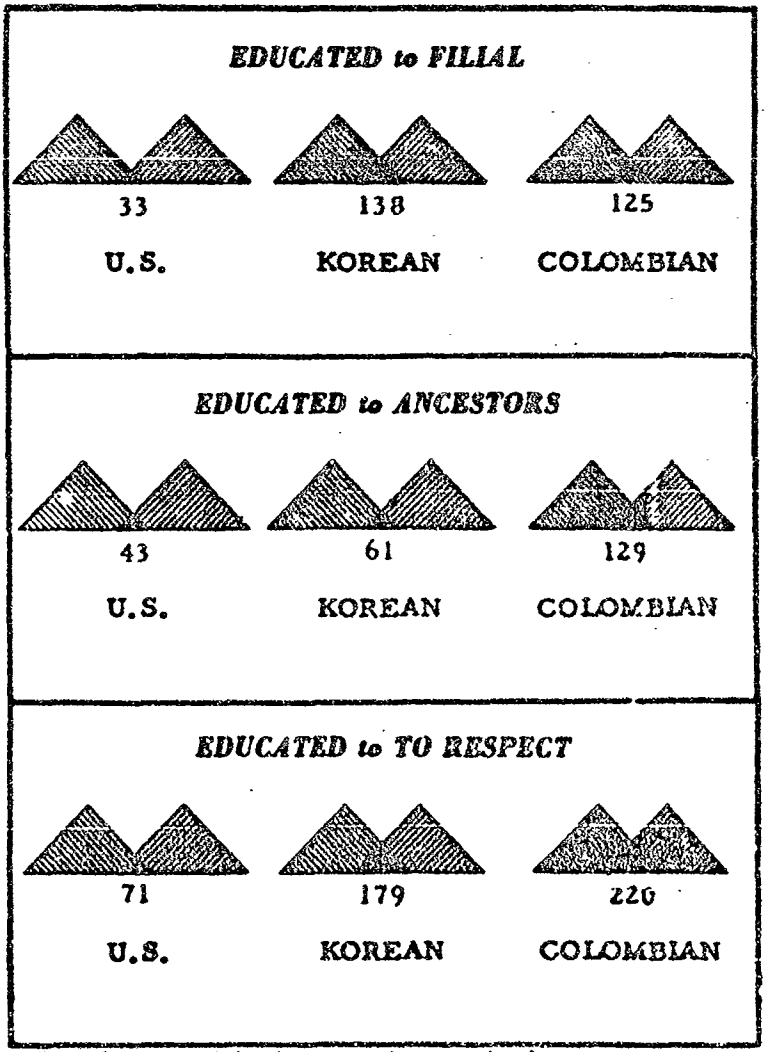
By overlapping associations in responses from one cultural group to two words. Numbers are indexes of intracultural associative affinity.

Figure 5. Intracultural Associative Affinity of Hungry to Three Other Words



By overlapping associations in responses from one cultural group to two words. Numbers are indexes of intracultural associative affinity.

Figure 6. Intracultural Associative Affinity of Educated to Three Education-Related Words



By overlapping associations in responses from one cultural group to two words. Numbers are indexes of intracultural associative affinity.

Figure 7. Intracultural Associative Affinity of Educated to Three Family-Related Words

for the Colombian. The U. S. group reveals the closest affinity of educated to school and to learn and the second closest to knowledge, that is, the affinity shown by the Colombian group in most instances is substantially lower and the affinity shown by the Korean group is two times out of three lower than the affinity revealed by the U. S. group. This suggests that for the foreign groups, educated is less synonymous with learning and intellectual development than it is for the U. S. group.

The same observation is indirectly supported by the data obtained with the words in figure 7.

The cultural associative affinity of educated to filial, ancestors, and to respect show the opposite results: U. S. associative affinity indexes are in all cases the lowest; Colombians generally reveal the highest affinity. This implies that education is substantially more family related in the respective foreign countries than in the United States. This could be defined more clearly by analyzing the affinity patterns revealed in connection with further relevant stimulus words. For the present purpose, it suffices that these indications are in agreement with the cultural observation that in the South American countries, as well as in Korea, education depends upon family and family position. Furthermore, regarding its content, this finding, for Colombia at least, is in line with the Roman Catholic approach to education, putting substantial emphasis on the adoption of moral principles and behavioral standards beyond the individual's intellectual development.

It may be pointed out at this point that there is nothing new in finding out that rice represents the most important food for Koreans or that educated is an intensely family-related issue in South America. However, in the present investigations it is important to observe the high level of correspondence between

associative data and cultural differences. Our findings on such culturally verifiable items allow us to put credence in results obtained on more subtle, unexplored, or unverified items such as social and political concepts.

Figure 8 gives the affinity patterns of political to power, social, and to rule for the three cultural groups. The Korean group shows the highest level of affinity, and the indexes are in all instances significantly higher than those obtained from the U. S. and Colombian groups. This finding is in substantial agreement with Hon Sung-Chick's observations concerning the intensive interest of Korean students in politics.[5]

Figure 9 gives the culturally characteristic associative affinity of the word socialism to three other politically relevant words: equality, power, and communism. For the Korean group socialism and communism are least related; for the Colombian and U. S. groups socialism and communism are closely related. Also for the Korean group, socialism has little affinity to power and the most affinity to equality.

This approach gives the opportunity of exploring the associative meaning of a particular stimulus word in terms of its relationship to other stimuli or groups of stimuli. However, it has the intrinsic limitation that only those relationships which are represented by the stimulus words used in the study are amenable to quantification. The stimulus list actually used sets limits for this type of analysis by the number of possible stimulus combinations. Chapter VII outlines a different approach designed to meet this difficulty.

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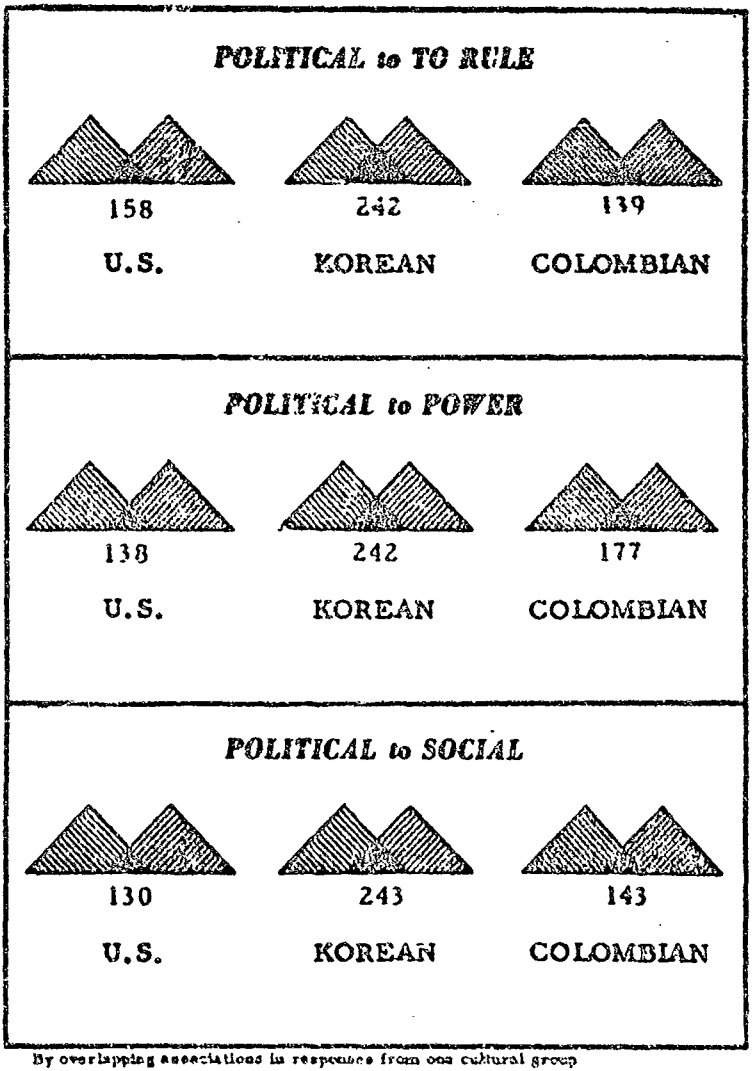
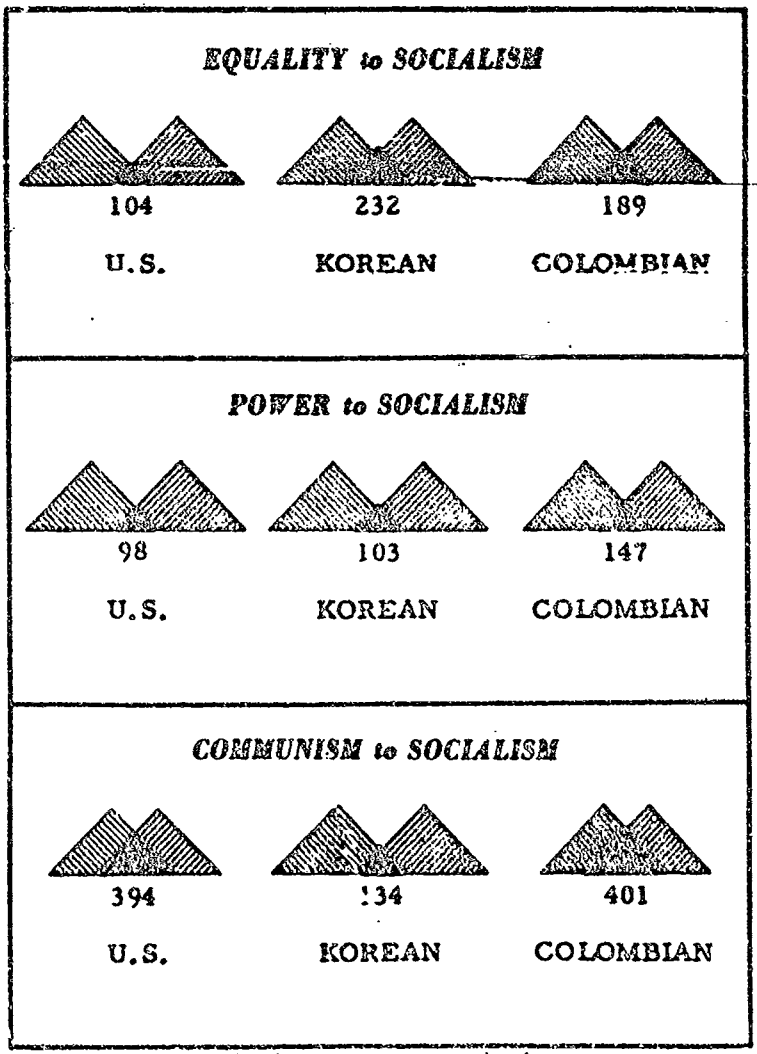
5. Hon Sung-Chick, "Values of Korean College Students," Journal of Asiatic Studies, 6 (May 1963), 55-95.



By overlapping associations in response from one cultural group to two words. Numbers are indexes of intracultural associative affinity.

Figure 8. Intracultural Associative Affinity of Political to Three Other Words



By overlapping associations in responses from one cultural group to two words. Numbers are indexes of intracultural associative affinity.

Figure 9. Intracultural Associative Affinity of Socialism to Three Other Words

CHAPTER VII. CONTENT ANALYSIS OF ASSOCIATIVE GROUP RESPONSES

As already discussed, associative responses provide many culturally specific details. The responses may be grouped into meaningful content categories. For example, analyzing the responses to the word hungry, it is possible to identify responses dealing with food, responses dealing with persons, responses dealing with nations, etc. Proceeding in this way it becomes possible to determine the composition of the associative meaning of a particular word. The meaning of the word hungry can be explored in terms of the types of responses and their relative proportions. For example, the U. S. group yields a total score of 226 on food in general, a score of 13 on rice, and a score of 76 on poor and beggar. Similarly, the Korean group scores 51 on food in general, 161 on rice, and 193 on poor and beggar. These differences are clear and informative. They are in basic agreement with the data obtained in the previous analysis based on intracultural associative affinity indexes, indicating that hungry is more closely related to rice, to poor, and to beggar for the Korean than for the U. S. group. Content analysis has a substantial advantage over the previous analytic method in that it does not limit the analysis to the stimuli used in the experiment.

Figure 10 presents the meaning of hungry for the three cultural groups in respect to a number of selected meaning dimensions. As already mentioned, these results are in agreement with those obtained in the preceding analysis which was based on the comparison of intracultural associative affinity indexes. The U. S. group scored highest on food in general; the Korean group, on rice, on poverty and begging, and on persons and people; the Colombian group, on poverty and begging.

Figure 11 presents some main response categories in connection with food. The U. S. group scored highest on food qualities and evaluative reactions, on

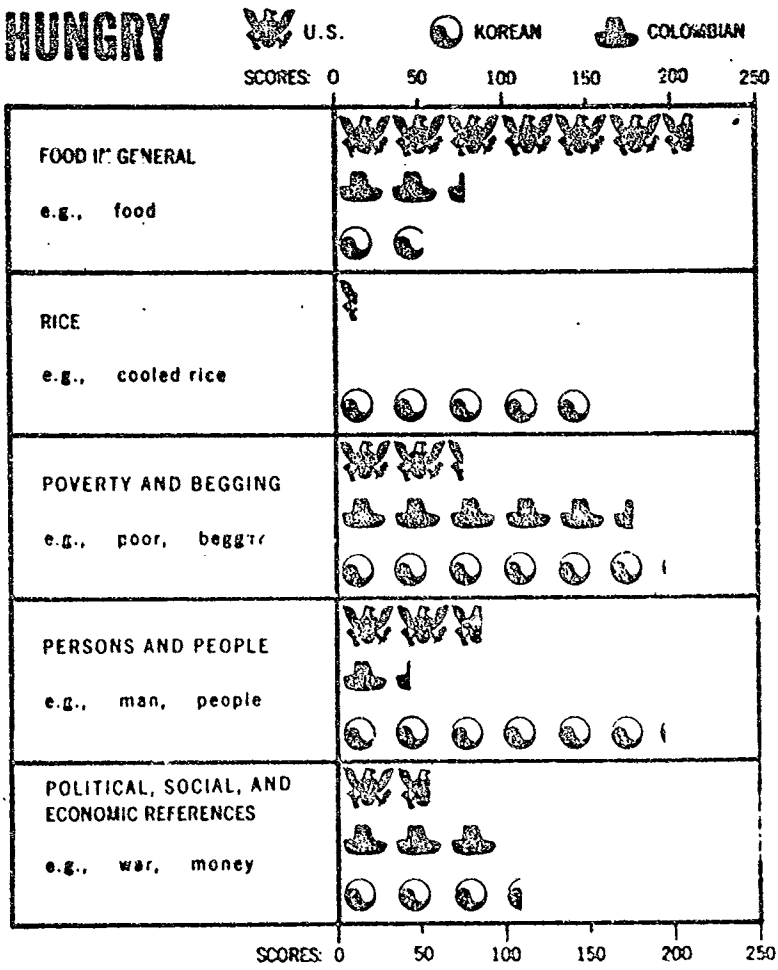


Figure 10. Responses to Hungry by Content Category.

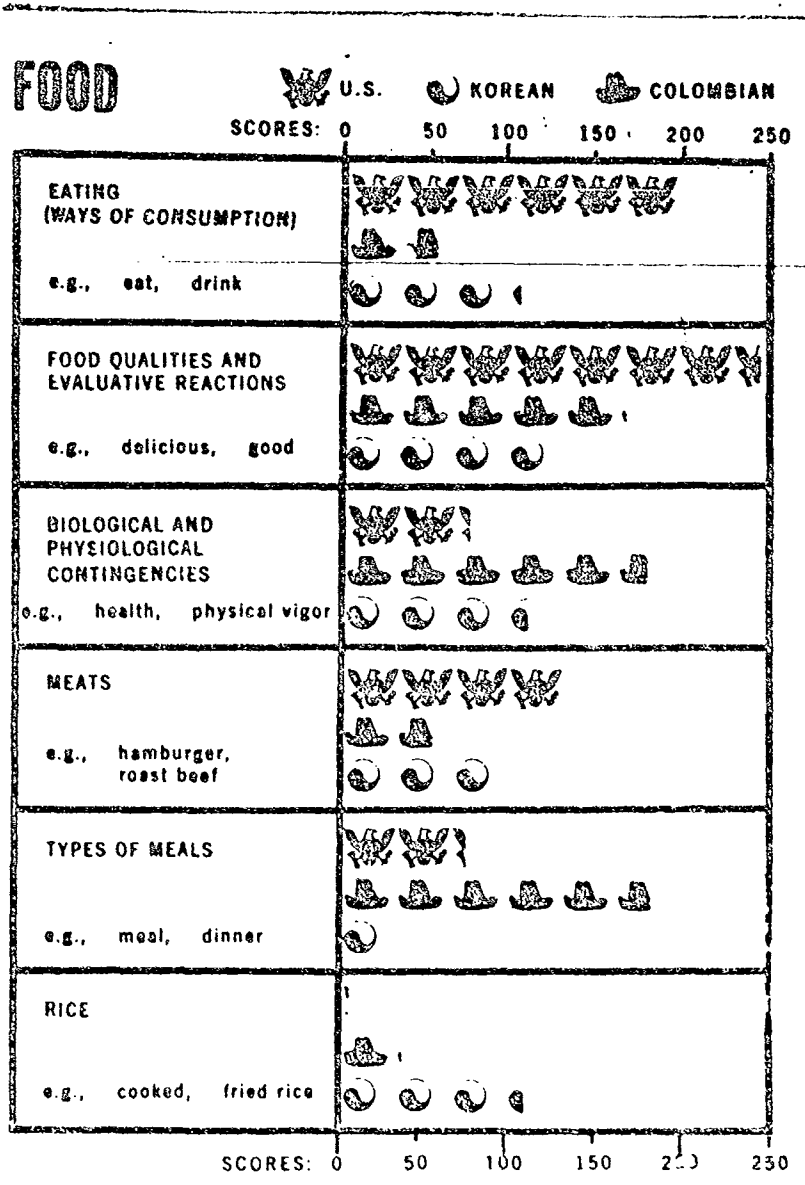


Figure 11. Responses to Food by Content Category.

eating (ways of consumption), and on meats. Although the Korean group scored higher than the others on rice, their highest score was on food qualities and evaluative reactions. The Colombian group scored highest on types of meals and on biological and physiological contingencies.

Annex B (Comparison of Intercultural Responses by Content Category) gives more details and also presents the content categories of the other two words of this reference sphere: rice and to eat. The response scores obtained with each of these words related to food and eating consistently reveal the tendencies already outlined.

After reviewing the response scores to these words in terms of the main categories, additional attention may be paid to the breakdown of a single category, for example, food varieties. The category food varieties is composed of any type of food response and is grouped in subcategories such as meat, bread, and rice. Figure 12 presents by categories the responses to the stimulus food from the three cultural groups. The figures used for the representation of the various categories of food are proportionally adjusted in size. For example, meat as the largest group response among all food categories is assigned the largest figure. A smaller response among the other categories of food is assigned a figure proportionally smaller than that of meat. Within the categories, the proportions for each cultural group are depicted by cutting the size-adjusted full figure into proportional segments according to the respective scores.

The cultural experts indicate that the proportions of responses in the food categories for the various cultural groups reflect the characteristic compositions of the cultural diet. The analogous lists obtained from other stimuli such as hungry and to eat are similar. The high culture specificity and the consistency of such patterns suggest that associative response material

RESPONSE CATEGORY	STIMULUS: FOOD		
	U.S.	KOREAN	COLOMBIAN
MEATS	 (127)	 (87)	 (57)
DESSERTS	 (53)	 (4)	(9)
VEGETABLES	 (48)	 (70)	 (51)
FRUITS	 (47)	(12)	 (51)
SALAD	 (16)	(0)	(4)
DRINKS	(7)	(9)	(20)

Numbers indicate response scores.

Figure 12. Proportional Representation of Food Responses by Content Category

RESPONSE CATEGORY	STIMULUS: FOOD		
	U.S.	KOREAN	COLOMBIAN
MEATS	 (127)	 (87)	 (57)
DESSERTS	 (53)	(4)	 (2)
VEGETABLES	 (48)	 (76)	 (51)
FRUITS	 (47)	 (12)	 (51)
SALAD	 (16)	(0)	(4)
DRINKS	(7)	(9)	(22)

Numbers indicate response scores.

Figure 12. Proportional Representation of Food Responses by Content Category

RESPONSE CATEGORY	STIMULUS: FOOD		
	U.S.	KOREAN	COLOMBIAN
DAIRY PRODUCTS	 (13)	(0)	 (69)
SPICES, Etc.	(13)	(12)	(5)
BREAD	(10)	(6)	 (40)
GENERAL	(8)	FOOD IN GENERAL (60)	(17)
RICE	(4)	 (103)	 (39)
SOUP	(0)	 (33)	 (13)

Numbers indicate response scores.

Figure 12. (Cont.) Proportional Representation of Food Responses by Content Category

obtained from cultural groups and submitted to appropriate content analysis provides reliable information about the culture-specific associative meaning content.

It may be pointed out again that the high level of correspondence found between associative data and cultural reality in the context of such concrete and verifiable items as *fruit* makes it possible to accept also at their face value the results obtained in connection with such abstract issues as *socialism* and *capitalism*.

To give examples, two words at the medium level of abstraction are used. Figure 13 presents the responses to the word *family*. The U. S. group gives the largest number of references to interpersonal relations and feelings; to home, house, and equipment; and to items and events of shared origins. The Colombian group gives the largest number of references to parents, to siblings, and to more distant relatives. The proportions of the father-mother, brother-sister, and parents-grandparents responses are culturally relevant, and an analysis of the concrete response provides further information on the culturally characteristic family relationships.

The responses to the word *ancestors*, given in figure 14, show especially dramatic cultural differences. The U. S. group gives the largest number of references to distant relatives and foreign nations, indicating that for the U. S. group ancestors means primarily a distant relative with foreign origin. References to conditions of primitive life (for example, cave) and animals indicate that the U. S. group is also heavily influenced by the natural sciences and the theory of evolution.

The Colombian group gives the largest number of references to ancient and other time references, to genealogical references, and to activities,

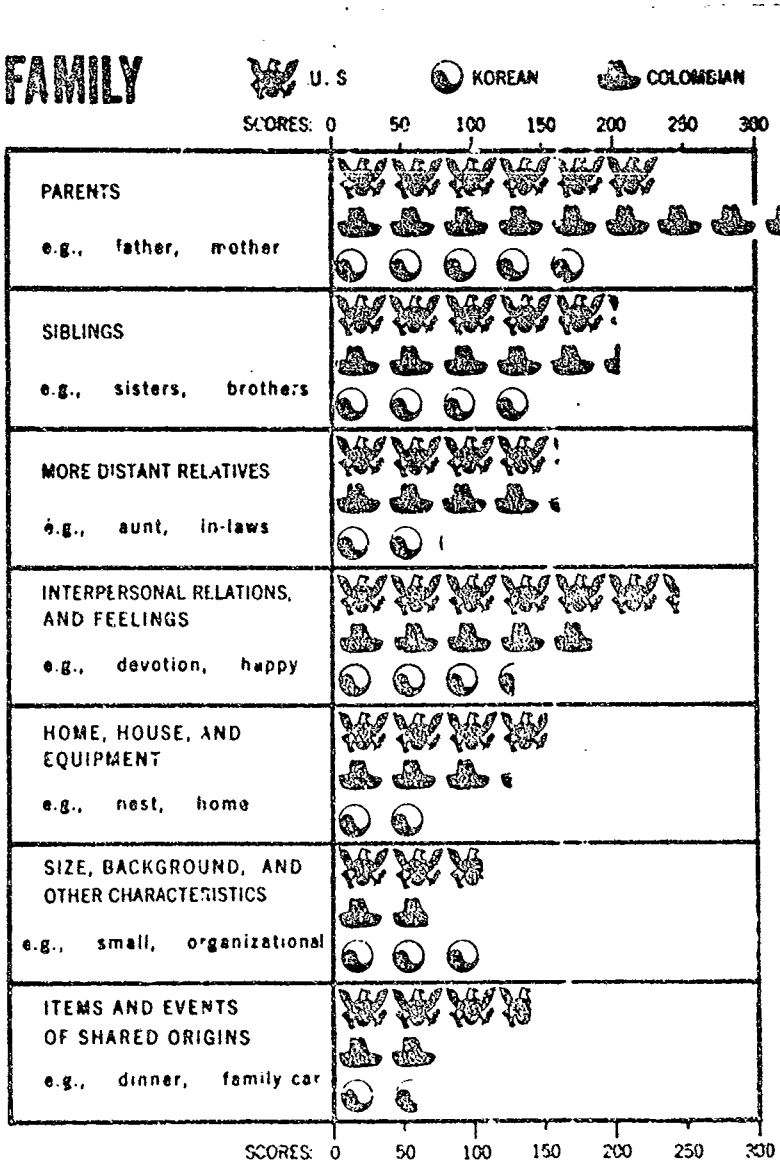


Figure 13. Responses to Family by Content Category.

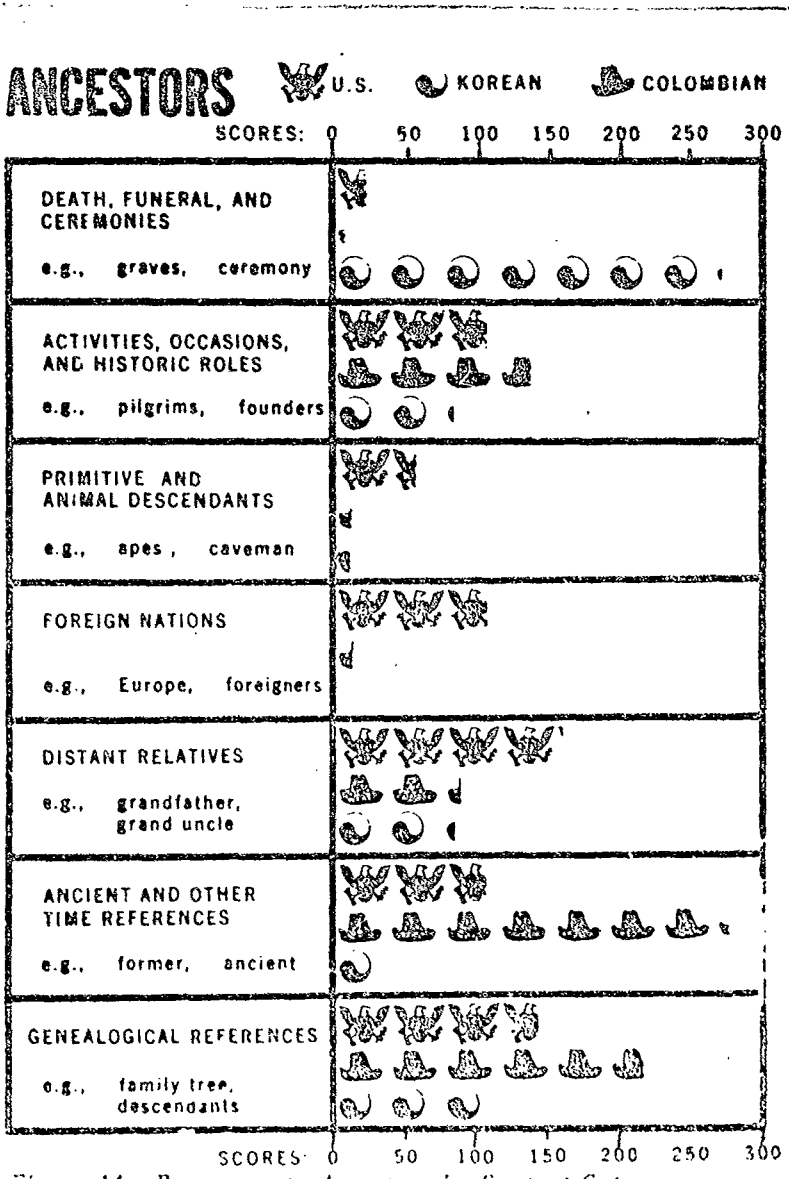


Figure 14. Responses to Ancestors by Content Category.

occasions, and historic roles. This indicates that for the Colombian group ancestors refers primarily to family history and ancient history.

The difference is most striking in the distribution of Korean responses (see table B21, annex B). The Korean group gives relatively few references to all the previously listed categories, which are so important for the U. S. and Colombian groups. They make, however, a large number of references to death, funeral, and ceremonies, indicating that ancestors represents mythical-religious figures related not so much to family or history as to religion. This interpretation is in complete agreement with the cultural data available on this issue. Contrary to the much-discussed fast modernization and shift of South Korean thinking, at least in the context of such traditional issues as these, the change seems to be much slower than as usually interpreted.

Although all these data find at least partial confirmation in anthropological literature, the field of abstract sociopolitical terms represents a terra incognita. Responses to such abstract political stimuli as communism or socialism reveal similarly clear differences between cultural groups.

Figure 15 presents the main content categories for the three cultural groups in respect to the word communism. The U. S. group gives more references to nations and to persons and groups. The Colombian group gives more references to ideology and propaganda and to terror and suppression than the two other groups. The Korean group gives more references to negative evaluation than the two other groups. A number of additional details could be mentioned. North Korea is the most frequently mentioned Communist country for Koreans, and Colombians mention Cuba more than twice as frequently as China. Karl Marx is the most frequently mentioned person by the U. S. group; Castro is the most frequently mentioned person by the Colombian group.

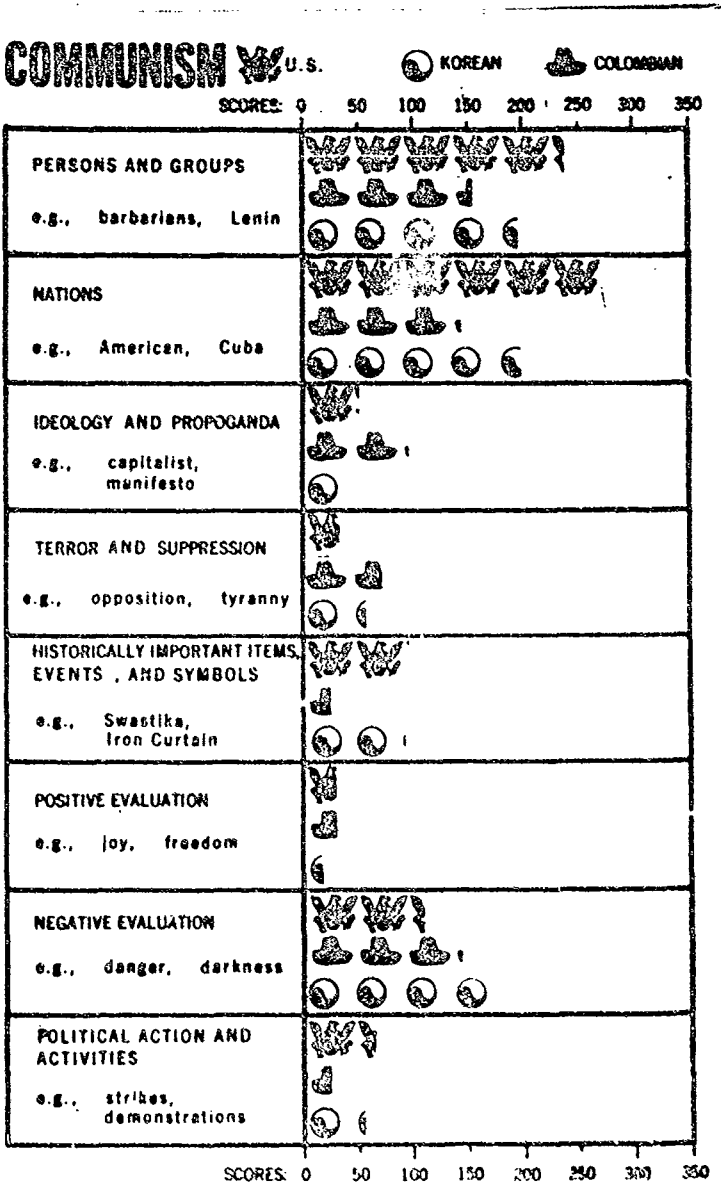


Figure 15. Responses to Communism by Content Category.

Figure 16 gives the characteristic content categories for the word socialism. The Korean group shows more identification between socialism and England than between socialism and the Soviet Union. The U. S. group mentioned Sweden most frequently from among the free European countries, yet they mention it only half as much as the Soviet Union. The Colombian group mentions France most frequently from the free European countries.

In content analysis, it must be realized that a certain arbitrariness is inherent in every categorization. There are also ambiguities which result in smaller or larger miscellaneous categories. Nevertheless, in spite of these difficulties we can reduce the large variety of responses to the main relevant content categories. Content analysis as a method of social science has reached a considerable degree of sophistication. In order to reduce distortions and facilitate comparisons in the context of the present investigations, the same categories were used for grouping the responses of all three cultural groups.

Theoretically a great number of different systems of categorization are applicable, some of them more meaningful than others. One advantage of this approach is that as new aspects emerge, the data can be regrouped and reanalyzed in various ways.

Certain content categories are directly informative. For example, the responses in the various food categories reflect the main items of the culture's diet (elicited by hungry, to eat), the responses in the beverage categories reflect the relative importance of the main drinks (elicited by thirsty, to drink); the frequent mention of various European countries reflects the relative importance of these countries as main sources of immigration (elicited by ancestors). Some other content categories are less direct in their indications. The frequently used "people in reference to..." category indicates by its proportions the person-

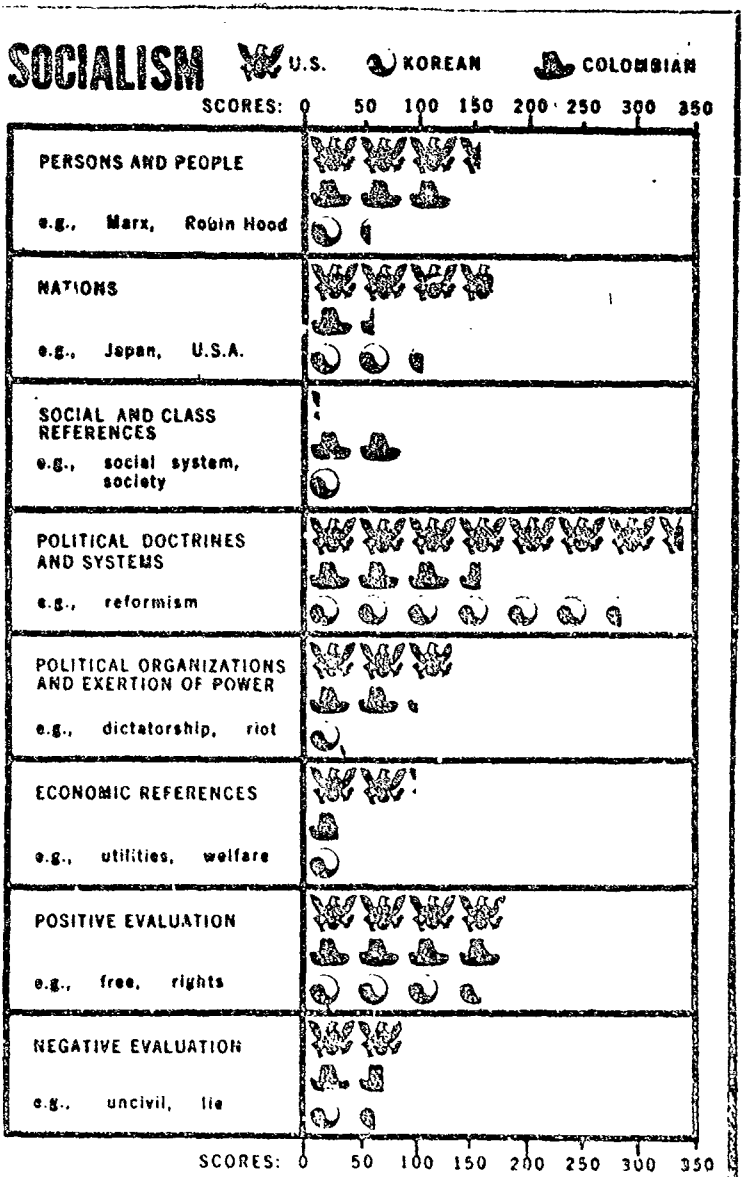


Figure 16. Responses to Socialism by Content Category.

relatedness or the impersonal and abstract character of the issue in indigenous perception. A centering of responses on such categories as foreign countries and foreign geographic locations may be taken as an indication of the remote character of the issue. High response frequencies in such content categories as references to pain and sickness and negative evaluation indicate a negative attitude, just as those in such categories as references to fun and entertainment and positive evaluation may be considered a sign of a positive attitude to the stimulus. Further analysis is in process with the objective of exploring practical methods in using associations to determine attitudes and their cultural value components.

CHAPTER VIII. CAPITALISM: AN EXAMPLE OF POSSIBLE DIFFERENCES

Of the abundant material obtained, only a small part could be included in the present report. Up to this point, considerable attention has been paid to concrete words (for example, rice) because they give better opportunity for cultural validation.

Although our primary operational interest is in the more abstract (social, political, etc.) reference spheres, their subtle nature makes it difficult to find cultural experts able to validate the results. Because such difficulties were anticipated, the stimulus lists were composed from reference spheres with comparatively easy verifiability (if less operational relevance) as well as from reference spheres with substantial operational relevance (and little if any, direct verifiability). Since association mechanisms are the same for both concrete and abstract reference spheres, the cultural validity found in the concrete areas suggests the validity of data obtained for more abstract areas.

Capitalism is used as an example to show the type of inferences possible in the more subtle and abstract reference areas. It is a highly controversial political idea and an important component of the U.S. image.

There are many indications that the concept of capitalism is not popular abroad, that it is not an attractive label with which to promote U.S. propaganda efforts. George V. Allen, former head of the U.S. Information Agency, recently formulated the conclusion: "The word 'capitalism' and the phrases which go with it are not good image producing symbols for us...."[6] Such observations are frequent, but they are seldom specific enough to explain what is actually wrong with the term.

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6. George V. Allen, "What the U.S. Information Program Cannot Do," Propaganda and the Cold War, ed. J.B. Whitton (A Princeton University Symposium; Washington, D.C.: Public Affairs Press, 1963), pp. 57-64.

Although different authors may disagree about the advantages or disadvantages of the role of capitalism in the U.S. image, there is no disagreement about the fact that this role is important. Neither is there much disagreement that the image represents a factor of primary political importance in the cold war. The importance of capitalism in determining the U.S. image and the importance of the U.S. image in influencing the trend of political development in emerging nations require that special attention be paid to how people around the world perceive capitalism.

This problem represents, even at first sight, subtle issues evasive to systematic empirical analysis. Clarification requires answers to a series of questions, important at various levels of propaganda planning and political decision making. Such general questions are involved as: (1) Do people around the world perceive the concept of capitalism differently from the people of the United States? Are there also differences among various foreign nations in how they perceive it? Do Europeans, for instance, perceive it differently from the nonaligned Asians or Africans? (2) Of what does the meaning of capitalism consist? Is it primarily an economic principle? Or is it primarily a social theory? (3) Which are its perceived virtues or disadvantages? Is it perceived as a remnant of the past or a solution for the future? Do people basically like it? Or do they dislike it? Why? (4) Do people identify capitalism only with the United States or are there also other countries identified with capitalism? Is the United States perceived as the main personification of capitalism? Who are the people specifically associated with it? Which are the social roles associated with it?

These and many other questions have to be answered before an intelligent decision can be made in the use of this concept in overseas propaganda. Similarly, a long series of questions should be answered and these questions may result in considerably different answers if they are addressed to people and groups with

different ethnic, social, political, and cultural backgrounds. The problems of intelligent propaganda planning are further complicated by the fact that it is not enough to decide whether to use capitalism as a label or not; it is also necessary to decide how to use it appropriately, how to reinterpret it, or how to substitute for it.

How useful are the data obtained by associative group analysis in answering these operational questions? The objective in the present study was not to select groups representative of any populations, but only to include groups clearly different culturally. As a consequence the data cannot be taken as representative of the respective countries; it only indicates the direction of differences between them. Since subjects were students in one section of the United States, the groups are more similar and less country specific than might be expected in representative samples. With these limitations in mind, the results are not to be generalized for the three cultures or countries involved, but are to be used in exploring the analytic potentialities of the method.

The data obtained in connection with capitalism demonstrate the type of inferences which can be made in clarifying the cultural meaning of such highly abstract and complex items. In reference to question 1, whether people of the United States and of other countries mean the same thing by capitalism and whether various foreign nations agree about the meaning of capitalism, our data give very explicit negative answers. Even at the generic level of information supplied by the indexes of intercultural associative affinity, the data are unequivocal in showing that the three cultural groups differ substantially in the associative meaning of this term. Not only do the two foreign groups differ from the U.S. group, but in this particular case they differ even more from each other.

The respective intercultural indexes show the following distribution:

U.S. to Korean	271
Korean to U.S.	311
U.S. to Colombian	260
Colombian to U.S.	267
Korean to Colombian	220
Colombian to Korean	192

This range of indexes (200–300) represents a low-to-medium level of affinity (see chapter V). These data also show that there is more agreement between the Korean and U.S. groups than between the Colombian and U.S. groups on this issue.

In answering question 2, what is the nature of the difference in the meaning of capitalism for the three cultural groups and is this difference basic, there are two main sources of information, indexes of intracultural associative affinity and content analysis.

With the indexes of intracultural associative affinity, the cultural meaning of capitalism can be studied in terms of its affinity to other relevant terms (for example, socialism and communism) or to other reference spheres (for example, economic, social, and political). Data in table 3 indicate that the U.S. and Colombian groups relate capitalism and socialism more than the Korean group. The generally high Colombian indexes are somewhat surprising and seem to indicate a certain ambivalence and lack of differentiation in respect to these political concepts.

The data on reference spheres (table 3) are based on averages of associative affinity indexes for the other stimuli in these reference spheres (see table 1). Since only four words represent each reference sphere and their selection is arbitrary, these figures are to be used with appropriate caution. Nevertheless, the Colombian group's high overall average of indexes of intercultural associative affinity suggests the ambivalence and lack of differentiation already mentioned. Furthermore, for the U.S. and Colombian groups, capitalism has the highest affinity

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Table 3. Intracultural Associative Affinity of Capitalism

	Indexes of Associative Affinity		
	U.S.	Korean	Colombian
Political Concepts			
Socialism	243	182	349
Communism	174	215	275
Reference Spheres			
X (Economic)	190	138	226
XI (Social)	126	137	161
XII (Political)	115	124	172
Overall reference sphere average	144	133	186

to reference sphere X (economic); for the Korean group capitalism has about equal affinity to reference spheres XI (social) and XII (political). This indicates that although capitalism has a prominent economic-financial connotation for the U.S. and Colombian groups, it has about the same affinity to social and political issues for the Korean group.

This is supported by the data obtained in content analysis at a medium level of generality (see table 4). The responses of the U.S. group are primarily economic and financial and secondarily social and political. The responses of the Colombian group are also primarily economic and financial and secondarily social and political, although the difference between the two categories is not as great as for the U.S. group. The responses for the Korean group are as much social and political as economic and financial.

A further breakdown of categories gives more information. In the social and political category, the U.S. responses contain more "isms" (which may be more a matter of morphology than content). Korean responses are generally less abstract. Most of the Korean social-political responses are in the categories of references to persons and people and references to countries and nations. Other Korean responses are to society-related functions and phenomena: mechanical culture, unification, fighting, struggle, etc.

In the economic and financial category, the U.S. responses refer more to economic principles, doctrines, and business than responses of the other groups; few responses refer to the societal implications of capitalism. This supports previous observations. The responses of the Korean and Colombian groups contain few references to economic theory; responses are related primarily to such concrete items as money, business, and commodities (food, cars, houses). Their responses indicate intensive concern with the societal aspect of capitalism and have explicit critical

Table 4. Responses to Capitalism by Content Category

Content Categories	Percent of Response Scores		
	U.S.	Korean	Colombian
Persons and people	10	19	12
Countries and nations	14	18	3
Financial and economic references	46	25	35
Social and political references	21	24	28
Education, religion, ideology and history	2	3	5
Qualities and characteristics	8	10	9
Miscellaneous	1	1	8

overtones.

Question 3, how is capitalism evaluated, can be answered simply by determining the number of positively and negatively weighted terms. The content category qualities and evaluative characteristics includes nouns and adjectives with more or less explicit evaluative connotations. Positive and negative response scores were in the following proportions:

	Response Scores		
	U.S.	Korean	Colombian
Positive (neutral) responses	69	27	60
Negative responses	40	82	53
Total	109	109	113

As the relative response proportions indicate, for the U.S. group the positive reactions to capitalism outweigh the negative ones, whereas for the Korean group reactions to capitalism are overwhelmingly negative. The Colombian group gave many evaluative responses, nearly equally divided between positive and negative, indicating ambivalent feelings.

Not only are the proportions indicative, but also the particular value connotations of the single responses in this category (see table 5). The responses reveal more than positive or negative attitudes. They do not say merely that capitalism is good or bad; they also indicate the nature of the specific values which the cultural groups use in evaluating (supporting or rejecting) capitalism. A simple reading of the responses reveals a number of characteristic components, for example, the overwhelmingly individualistic and economic connotation of the positive terms used by the U.S. group as opposed to the societal and moralistic connotation of the negative terms used by the Korean group. It is also to be noted that the relatively few positive Korean responses and the larger number of positive Colombian responses center around the idea of large size and richness.

Table 5. Positive and Negative Responses to Capitalism

U. S.	R.S.	Korean	R.S.	Colombian	R.S.
Positive					
Nouns					
Desire	7	Hope	4	Greatness	11
Success	3	Hugeness	3	Pride	5
Right	3	Pride	3	Benefit	4
Benefits	2			Trust	3
Joy	5			Efficiency	3
Subtotal	20		10		26
Adjectives					
Free	9	Individualistic	6	Rich	10
Private	6	Live well	5	Common	6
Equal	5	Small	3	Social	5
Independent	4	Gorgeous	3	Small	4
Very good	4			Modest	3
Nonregulatory	4			Strange	3
Affluent	3			Unknown	3
Revolutionary	3				
Great	3				
Helpful	3				
Modern	3				
Rich	2				
Subtotal	49		17		34
Total Positive	69		27		60
Negative					
Nouns					
Corruption	6	Poverty	8	Poverty	10
Greed	5	Disease	6	Hunger	9
Selfishness	3	Egoism	6	Injustice	9
Inequality	3	Complaints	6	Inconvenience	6
Distortion	3	Inequality	6	Selfishness	6
Disagreement	3	Primacy of money	5	Indifference	3
Hunger	3	Miser	4	Ignorance	2
		Misery	3	Avarice	2
		Ignorance	3		
		Arrogance	3		
		Cancer	3		
		Unequality	3		
		Hatred	3		
		Hardship of life	3		
		Disorder	2		
Subtotal	26		64		47

R.S. means response score

Table 5. Positive and Negative Responses to Capitalism (Cont.)

U. S.	R.S.	Korean	R.S.	Colombian	R.S.
		Negative (Cont.)			
Adjectives					
Imperialistic	3	Materialistic	5	Guilty	3
Ungenteel	3	Harmful	4	Bad	3
Antisocialist	3	Bad to society	3		
Greedy	3	Extravagant	3		
Bad	1	Unequal	3		
Poor	1				
Subtotal	14		18		6
Total Negative	40		62		53

R.S. means response score

Finally, an answer can be given to question 4, with which persons or nations is capitalism identified. It has been observed that there are substantial differences in the identification of communism. The U.S. group identifies it primarily with the Soviet Union; the Korean group, with North Korea. There are also differences with regard to socialism. The U.S. group identifies socialism with the Soviet Union, but the Korean group, with England. Therefore, it is reasonable to ask: Which are the persons or nations identified with capitalism? How much, how exclusively do the groups under study identify capitalism with the United States?

Table 6 gives the responses identifying capitalism with persons. U.S. responses refer to many concrete people, but to few concrete professions and institutions. The Colombian and, especially the Korean responses include only a few concrete references, but there are a large number of abstract references to professions and societal roles. Korean responses are also characterized by a large number of references to people by attributes.

The category references to countries and nations attracted the most answers from the Korean group. As table 7 indicates, there is an almost exclusive identification between the United States and capitalism for the U.S. and Korean groups. The Colombian responses are somewhat more diversified in this respect. This may be partially explained by the fact that they also identify their own country with capitalism to a certain extent. There are various indications of this throughout the data (in references to family members, friends, etc.), but it is hard to draw precise conclusions.

As a final note it may be mentioned that paradoxically the Colombian student group does not show much relationship to the stereotype identifying South Americans as anticapitalists. This group is predominantly from wealthy families; they have obviously more capitalists in their families than the U.S. student sample. This

Table 6. Identification of Capitalism with Persons

U. S.		Korean		Colombian	
		Individuals			
Representative	R.S.*		R.S.		R.S.
Rockerfeller	8	Adam Smith.	14	Rockerfeller	6
Brandenburg	8	Rockerfeller	12	Roosevelt	6
J.P. Morgan	7	Keynes	3	D. Ricardo	5
Carnegie	5	J.P. Morgan	3	Rojas	3
Calvin	5			Adam Smith	3
Max Weber	5				
Luther	4				
Galbraith	3				
Goldwater	3				
Fiske	3				
Schumpter	3				
Ricardo	2				
Alexander Hamilton	1				
Subtotal	57		52		23
Critics					
Khrushchev	3	Marx	6	Khrushchev	6
Marx	3			Stalin	3
				Marx	3
				Castro	3
				Lenin	3
Subtotal	6		6		18
		General References to Roles and Professions			
Entrepreneurs	8	Laborer	17	Capitalist	14
Itinerant merchant	7	Capitalist	13	Man	12
Individual	6	Profiteer	11	Merchant	6
Capitalist	6	Businessman	9	Leaders	6
Monied aristocracy	5	Bourgeoisie	6	Proletarian	6
Merchant	4	Individuals	5	Magnates	5
Workers	3	President	5	Masses	5
		Hollywood movie stars	4	Millions	5
		Politician	3	Reunion	4
		Entrepreneur	3	Manipulator	3
				President	3

* R.S. means response score

Table 6. Identification of Capitalism with Persons (Cont.)

U. S.		Korean		Colombian	
	General References to Roles and Professions				
	R.S.		R.S.		R.S.
		Beggar	3	Dealer	3
		Landowner	3	Individual	3
		Man of authority	3	Workers	3
		Workers	3	Chief	2
		Occidentals	5		
Subtotal	39		93		80
	Persons Denoted by Attributes				
Fat men	2	The wealthy	44	Millionaire	16
		The poor	7	Americans	6
		The rich	6	Friends	3
		The needy	6	Comrade	3
		The aristocrat	4		
		The poor and the wealthy	3		
		The noble	3		
		The inferior	3		
Subtotal	2		76		28
	Institutions				
Wall Street	11	Wall Street	4	Colleges	3
New York Stock Exchange	5	Commercial Street	4	Family	3
SOHO	4				
Pentagon	3				
Subtotal	23		8		6
Total	127		215		155

*R.S. means response score

Table 7. Identification of Capitalism with Countries and Nations

U. S.		Korean		Colombian	
Specific Nations	R. S.		R. S.		R. S.
United States	74	America	139	U.S A.	14
America	32	Soviet Union	14	Russia	12
American	8	England	10	America	3
British	5	American example	4	Colombia	3
Russia	3	South America	3	Latin America	3
Europe	4	U.S.A	3	Cuba	2
Ottoman Turks	2	Viet Nam	2		
		Red China	2		
Subtotal	128		177		37
Indefinite Peferences					
State	9	Developed nation	9	Dominium	4
Country	8	Nation	6	Dominion	4
Free world	8	Foreign nation	5	Nations	3
German	7	Land	3	Country	1
West	6	Free world	5		
Land	5	Modern nations	5		
What some Europeans think of some Americans	5	Imperialist country	1		
Western world	1				
Subtotal	49		34		11
Total	177		211		48

*R. S. means response score

situation is a source of inner contradiction and ambivalence which complicates the picture. (The Korean group showed the same deviation from the average.)

The data obtained by Associative Group Analysis clearly reflects this ambivalance in respect to the Columbian interpretation and provides detailed and specific information on the culturally characteristic meaning content, value components, and personal and national identification of the three cultural groups in respect to the word capitalism. The systematic use of such specific information in intercultural communication and psychological operation is an intriguing problem, but its discussion is beyond the scope of the present report.

CHAPTER IX. OPERATIONAL UTILIZATION AND EXPERIMENTAL OBJECTIVES

The results based on the data already evaluated indicate that the Associative Group Analysis provides abundant, objective, and empirically verifiable cultural data on nonpolitical and political issues relevant to the information needs of intercultural communication and psychological operations. The capacity for operationally highly relevant empirical data collection is fortunately combined with advantages in administration. Compared with other cross-cultural research methods, the Associative Group Analysis is simple and easy to administer, and it has advantages which are especially important in respect to its operational use. People of foreign countries frequently object to making statements about social and political issues, because such statements imply commitments. Associative responses do not involve statements and do not imply self-commitments. Therefore, there would be expected little hesitation in giving responses.

The collection of data is relatively simple since associative responses are easily obtained in abundance. Associative tasks can even be administered to illiterates. Obtaining useful data about delicate issues such as communism does not require using the particular word as a stimulus; relevant responses may be obtained by using related words such as socialism and proletariat. This makes it possible to organize research and collect socially and politically relevant cultural data in the form of comparative cross-cultural explorations, free of political overtones.

However, there remain further questions which require solutions or experimental clarification. The present report is based on the analysis of only a portion of the data collected. The evaluation of more of the data is expected to clarify further details and increase the utility of the method. A comparative study of associative data and results yielded by similarity ratings and the semantic differential will be used to evaluate the effectiveness of associative group analysis, to supply information on the cultural perception of meaning similarity (reflected by similarity

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judgments), and to provide data on culturally characteristic evaluations (reflected by the evaluation factors of the semantic differential). A comparative analysis of the native and English language associative tasks will be used to evaluate the scope and character of influences exerted by the language on the associative data. These technical details provide the content of a report in progress presenting empirical results in respect to the cultural sensitivity, validity, and effectiveness of Associative Group Analysis.

To increase the operational utility of the method it is important to gain additional experiences in its use. The application of Associative Group Analysis in South Vietnam and possibly also in South America is expected to increase our knowledge in respect to such operationally important questions as the use of the method at the target audience (subcultural) level, selection of stimulus words in line with predetermined operational interest, simplification of the evaluation process, skill in the field administration, etc.

After opportunities have been given for repeated field use of the Associative Group Analysis, a report will discuss various aspects of its operational application. This report will elaborate on a research strategy required for translating operational problems into tasks realizable by Associative Group Analysis.

One experimental task of considerable theoretical and operational relevance is to demonstrate that messages based on cultural information obtained by Associative Group Analysis are better understood and more persuasive than messages designed on the basis of experiences limited to the communicator's own culture.

ANNEXURE

ANNEX A: THEORETICAL CONSIDERATIONS

CHARACTERIZATION OF ASSOCIATIVE GROUP ANALYSIS

Because of the long history of association experiments in psychology and the prevalence of particular clinical and experimental approaches, associations are usually considered in terms of one of these approaches. The new approach, Associative Group Analysis, has the following distinctive characteristics.

Associative Group Analysis contrasts to the usual clinical and experimental use of verbal association[7] in several ways. It emphasizes the content of the associations rather than the secondary response characteristics of reaction time, response fault, etc. It is not concerned with individual diagnosis but rather with evaluation of group differences. It does not use standard stimulus lists, but rather lists of stimuli varying according to the different subject matters and objectives of various investigations. Most experimental approaches use only a single response obtained from a subject to each stimulus word[8]. Associative Group Analysis relies on a series of responses obtained from a group of subjects in time-limited (1 minute) associative tasks ("continued" or "continual" associations).

General practice is to urge the subject to respond as quickly as possible with the first occurring response word. The present approach does not press

7. J.G. Jung, "The Association Method," American Journal of Psychology, 21 (1910), 219-269; G.H. Kent and A.J. Rosanoff, "A Study of Associations in Insanity," American Journal of Insanity, 67 (1910), 37-96 and 317-390; D. Rapaport, Diagnostic Psychological Testing (2 vols.; Chicago: Year Book Publishers, 1950); A.M. Tinker and R.H. Baker, Introductions to Methods in Experimental Psychology (New York: Appleton-Century, 1946); and W.A. Russell and J.J. Jenkins, The Complete Minnesota Norms for Responses to 100 Words from the Kent-Rosanoff Tests (Tech. Rept. 11; Minneapolis: University of Minnesota, 1954).

8. R.S. Woodworth and H. Schlosberg, Experimental Psychology and Verbal Behavior, 1-3 (1962-1964), passim.

for fast responses but instead asks for a listing of associated items at a normal response rate. This method of administration increases the likelihood that meaning content rather than verbal habits will trigger the responses. Although recent serious efforts have been made to use associations for exploring meaning and verbal relatedness, these efforts are based mostly on the English language and are limited to Western culture.[9] The present experiments are an effort to use free association tasks for systematically obtaining information in areas outside of Western culture. This is a new venture, since the few earlier cultural-anthropological explorations which used verbal associations were not methodologically oriented, but used verbal associations in a form similar to clinical tests.[10]

The conventional associative approaches rely primarily on mechanical-verbal reaction mechanisms, and the clinical tests explore, pathologically or otherwise, symptomatic deviations from predetermined standards in order to diagnose individual functional disturbances. Associative Group Analysis has as the main objective the exploration of the culturally and ecologically conditioned frame of reference characteristic of various groups. It proceeds by analyzing the word stimuli as cognitive verbal units, in terms of their cultural meaning content, composition, and patterns of interrelationship.

9. Deese, "Form Class," Journal of Verbal Learning and Verbal Behavior, 1 (1962), 73-84; Deese, "Influence," Psychological Review, 69 (1962), 161-175; C.N. Cofer, "Associative Commonality," Psychological Report, 3 (1957), 603-6-6; P.M. Jenkins and C.N. Cofer, "An Exploratory Study of Discrete Free Associations to Compound Verbal Stimuli," Psychological Report, 3 (1957), 599-602; B.E. Carekof and J.P. Houston, "Verbal Relatedness," Psychological Review, 70 (1963), 277-288; and B.H. Cohen, W.A. Bousfield, and C.A. Whitmarsh, Cultural Norms for Verbal Items in 43 Categories (Tech. Rept. 22; Storrs, Conn.: University of Connecticut, 1957).

10. Cora Du Boise, The People of Alor (Minneapolis: University of Minnesota Press, 1944); and M.C. Carstairs, The Twice-Born: A Study of a Community of High Caste Hindus (Bloomington: Indiana University Press, 1958).

SCORING SYSTEM AND ITS THEORETICAL RATIONALE

The subjects were instructed to give a number of responses to each stimulus word. This approach presents the problem of how to handle associative responses obtained at different ranks in the emission of responses. Both professional literature and common experience indicate that there is a difference in the relative importance of associations obtained. There is a difference between first responses and later ones. The use of associates with different relative importance requires the introduction of a scoring system to account for the differences.

The problem of scoring leads to a number of controversial theoretical issues. The majority of researchers working in the field of verbal associations use only the first responses elicited by word stimuli. They use large sample populations and measure the frequency distributions of single responses elicited by a standard list of word stimuli (for example, Minnesota norms based on the Kent-Rosanoff stimulus list[11]).

The first response obtained in free association tasks is merely the first of a series of responses contingent on the stimulus word. Limiting associative reactions to the first response means that all the later responses (2, 3, etc.) are consistently neglected. Garskof and Houston [12] and others rightly argue that the delimitation of interest to the primary response is an arbitrary decision of important methodological consequences. It results in neglecting a considerable part of "associative meaning."

11. Russell and Jenkins, Minnesota Norms (Tech. Rept. 11; Minneapolis: University of Minnesota, 1954).

12. Garskof and Houston, "Verbal Relatedness," Psychological Review, 70 (1963), 277-288.

Although this part should not be neglected, accounting for it according to its relevance is a complex problem. How much do earlier responses count over later responses? For example, in the response series food, steak, drink, yesterday, need, poor, Asia, elicited by the stimulus hungry, what is the relative importance of food as a response over Asia as a response. The approach used in the present experiments is an attempt to define empirically the relative importance of associative responses as a function of the rank of emission.

In determining the relative importance of associations, their stability of recurrence was taken as a direct indication. It was assumed that the closer the connection of an associate to a stimulus word, the greater stability it shows in being elicited by that stimulus word. Thus, if the degree of relationship of first, second, and third associates, etc., to the stimulus decreases, it may be expected that this will be genuinely reflected in the decreasing frequency by which they reappear in a later retest. If this relationship between rank of emission and stability of recurrence obtains experimental evidence, the stability of recurrence can be used to determine the amount of relative importance of various ranks of emission.

Following this rationale, a separate investigation of the stability of associations over a certain time period (1 week) was explored. Twenty-one students were used, and 32 words were administered in time-limited (1 minute) free association tasks. One week later the same words were administered again to the same group (retest). The subjects were instructed in the retest to respond to the stimuli as if they were seeing them for the first time. They did not have to consider their earlier responses. They could give the same response or any other new response. After the retest, associations

obtained in the first test were compared with association data obtained to the same stimuli in the retest. The relative frequency with which associations in different places (1, 2, 3, etc.) in the first test of an individual reappeared in his responses in the retest was determined. The data in table A1 show a continuous decrease in the stability of the associates (.60, .48, .42, etc.) as a function of the lower ranks of emission.

The number of cases is relatively large, and the results give a curve of distinct shape. These relative frequencies provided empirical data about the relative stability of various associative ranks. They were used as simple one-digit scores for weighting different ranks according to their different stability, that is, their different associative importance.

This method of scoring makes it possible to score single responses, use them in the group response lists, and account for their relative importance on the basis of the individual ranks of emission.

The following scores were used for weighting individual responses.

Rank of Emission	1	2	3	4	5	6	7	8	9	10	11
Score	6	5	4	3	3	3	3	2	2	1	1

ASSOCIATIVE CONTENT AND PRIORITY PATTERNS

The main difficulty in using the content of verbal associations is the accidental character of some of the responses and the uncertainty of their relevance. For instance, Das Kapital obtained from a subject as an associative response to the stimulus book hardly reveals more than that the person knows of this book. The person may or may not be a student of political economics, a librarian, a Marxist, or a Communist. It is possible that he just saw a cartoon representing Khrushchev throwing this book at Mao's head.

Table A1. Relative Frequency of Recurrence of Associates

Rank of Emission	Number of Associates	Recurring Associates in Retest	Relative Frequency of Recurrence
1	629	381	.60
2	613	292	.48
3	579	242	.42
4	589	199	.34
5	528	172	.32
6	465	140	.30
7	359	91	.25
8	268	55	.20
9	187	29	.15
10	124	14	.11
11	48	6	.12

A particular response given by an individual may have a merely temporary and accidental character, or it may represent a stable and characteristic response disposition. Since a considerable number of individual responses have a merely temporary foundation and there is no way of separating the unstable, irrelevant responses from the stable and personally characteristic responses, each individual response must be handled as potentially accidental. Because this accidental character of single responses cannot be ruled out, the conventional tests based on associations generally ignore the associative content and, rather, use secondary response characteristics (reaction time, response fault, etc.). When, instead of individual, group characteristics are the subject matter of investigation, it is possible to dissipate these ambiguities. The methodological exploitation of this advantage is a basic feature of the present approach.

The associative group response lists, composed of many response items and distinguished by frequencies or response scores, permit the evaluation of the importance of a particular response (for example, Das Kapital) for the particular group in the context of a particular stimulus (for example, book).

The frequency of this response is the first source of information. From it can be determined whether the response is accidental. If out of a 50-member group, 25 gave the response Das Kapital, this response frequency indicates that the response is neither accidental nor unrelated to the group. It provides empirical evidence that there exists a genuine connection between the frame of reference of the group and the response Das Kapital.

Not only are frequencies of the single responses informative, but also their combinations, revealing distinct patterns of interrelationships. For

example, in the responses to hungry (table 2), the Korean responses are distinguished by the high frequency of certain responses: cooked rice, beggar, food, poverty, rice, etc. However, not only are the frequencies of these single responses characteristic for the Korean group, but also the interrelationship of the responses, which reveal characteristic patterns of cultural priorities: cooked rice precedes food, rice precedes meat, vegetables precede desserts, beggar precedes poverty, etc.

Such priority patterns become especially meaningful if the proportions of similar responses are explored. For example, those dealing with food varieties. The priority of food items can be established by separating the responses refering to food varieties from the response lists obtained from hungry. Figure 12 shows the prioriti[illegible] proportions of food responses from the three groups. The different groups show different food priorities, and according to cultural experts these food priorities reflect basic characteristics of the indigenous diet. It should be mentioned also that the food priority patterns obtained in connection with the stimulus hungry are closely similar to the food priority patterns obtained in connection with the other food-related stimulus words: [illegible] food, to eat.

In conclusion, Associative Group Analysis was based on the collective use of verbal associations obtained in free association tests from the members of a group. This method provides extensive response material, which shows distinct response proportions and priority patterns. These features enable the researcher to learn characteristic response dispositions and other group characteristics from the content of associations.

TRANSLATION AND EQUIVALENT STIMULATION

In this part of the experiments, a list of the stimulus words was used in the respective native languages in order to elicit free associations. The stimulus list was set up originally in English and designed to meet certain requirements of content and category; it was then translated into Colombian Spanish and into Korean.

Since the original stimulus list contained only common English words (with a minimal frequency of over 5 per million, Thorndike-Lorge count), a simple translation did not cause any difficulty. Three bilingual individuals were used for each foreign language, and only items characterized by a complete consensus were included in the final list.

Translation is a problem of paramount theoretical importance in the context of the present exploration, and it requires more elaboration. For those experienced in intercultural communication, the difficulties contingent on the untranslatability and cultural coloration of words may seem insurmountable. The potential scope of semantic pitfalls is considerable, and in the present approach efforts have been made to reduce the interference of semantic factors and to keep it under control.

Although there are many untranslatable words, many words have clear, concrete meanings and permit reliable translation. Thus, the approach may use this part of any vocabulary which is free from methodological difficulties in association experiments. Although this category of words is not easily identified, the present approach does not attempt to eliminate or neglect the culturally conditioned semantic differences but rather to systematically identify them.

Corresponding words used as stimuli in different languages are not supposed to be identical words, that is, words with exactly the same meaning. For instance, however carefully selected it may be, the word 배고프다 in Korean, used as corresponding to the English word hungry, may not mean exactly hungry but something between hungry and starving. If no closer translation is available, either word 배고프다 should not be used or it must be used with the necessary precautions and qualifications. Such word stimuli characterized by basically identical reference content but partially different semantic coloration should not cause any trouble, provided they are identified as such.

As was pointed out by Chu[13] and others, there is no such thing as cross-cultural stimulus identity. Even with visual stimuli (for example, pictures) which do not change phenomenologically, it cannot be taken for granted that they have the same meaning for people of distinctly different cultures. Since complete stimulus equivalence is impossible, stimulus words obtained by the consensus of bilingual translators may be the closest possible stimulus approximates available.

The use of the closest available stimulus equivalent requires the identification of the semantic differences as well as the exploration of the underlying stimulus relationships.

As a measure to control the semantic impact of a particular word, it is possible to use instead of a single stimulus word, a number of words characterized by more or less synonymous meaning or by partial overlapping of their references. Thus it becomes possible to compare and check response patterns obtained in respect to a number of morphologically different but

13. Godwin C. Chu, "Problems of Cross-Cultural Communication Research," Journalism Quarterly, 41 (Autumn 1964), 557-562.

semantically interrelated stimuli.

By using more than one stimulus word in a particular reference sphere, the verbal cognitive organization in respect to this sphere, as reflected by the consistent associative response patterns, can be explored. In the results of the investigations (chapter 4), there is considerable similarity in the response patterns elicited by the different stimuli. For example, the response lists obtained from a particular cultural group to the stimuli hungry, rice, food, and to eat show similar patterns and response characteristics irrespective of the specific stimulus used. A whole series of references with high frequencies (for example, rice, certain specific dishes, poverty, etc.) characterize the Korean responses to all four stimuli. These characteristics are not found to the same extent in the responses of, for example, the U.S. group, which has its own pecularities.

The present investigations provide many similar examples. These indicate that the closest available stimulus equivalents used in appropriately designed associative approaches are efficient in eliciting verbal reactions in certain reference spheres. The responses obtained in this way are informative since they reflect culture-specific content and cognitive organization.

CONCEPT OF ASSOCIATIVE AFFINITY

Two of the analytic approaches designed for the evaluation and use of the associative group response material are based on the concept of associative affinity. Two different types of indexes of associative affinity were introduced: the index of intercultural and the index of intracultural associative affinity.

The concept of associative affinity was developed to evaluate quantitatively the associative group response material. Associative affinity is based on the ratio of identical associates to the sum of all associates for a particular stimulus by a group. It is related to a number of analogous concepts used recently by researchers in verbal behavior: overlap coefficient,[14] verbal relatedness,[15] mutual frequency,[16] concurrence measure,[17] and measure of stimulus equivalence.[18] Associative affinity is the interrelationship of the two verbal stimuli as determined by the relative number of associates in common.

Associative affinity is a measure of the relatedness of one stimulus word to another for a group or a measure of the relatedness of different groups in respect to a single stimulus word. In either case, the relationship has two different

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14. Deese, "Form Class," Journal of Verbal Learning and Verbal Behavior, 1 (1962), 73-84; and Deese, "Influence," Psychological Review, 69 (1962), 161-175.
15. Garskof and Houston, "Verbal Relatedness," Psychological Review, 70 (1963), 277-288.
16. Cofer, "Associative Commonality," Psychological Report, 3 (1957), 603-606.
17. J.H. Flavell, "Meaning and Meaning Similarity: I, A Theoretical Reassessment," Journal of General Psychology, 64 (1961), 207-219.
18. W.A. Bousfield, G.A. Whitmarsh, and J.J. Danick, "Partial Response Identities in Verbal Generalization," Psychological Report, 4 (1958), 703-718.

values in two directions, that is, associative affinity is a two-dimensional concept. The affinity of hungry to poor is generally different than the affinity of poor to hungry. Similarly, the affinity of Korean to U.S. responses is generally different than the affinity of U.S. to Korean responses.

In calculating the associative affinity of stimulus word A to stimulus word B, both the associations elicited by A (A-associates) and those elicited by B (B-associates) must be taken into consideration. A comparison of these associations will reveal the associative responses in common. They will also show the extent to which the stimulus words elicit each other as associative responses.

The associations in common and the amount of direct elicitation expressed are to be divided by all the associations elicited by a particular stimulus word. The division is followed through the third decimal and the index is calculated by multiplying the quotient by 1,000.

The following formula may be used to calculate the index of intracultural associative affinity:

$$\text{Intracultural index } AA_{X(A \rightarrow B)} = \frac{\Sigma \text{identical A-associates to B}}{\Sigma \text{A-associates}} \cdot 1{,}000$$

where: A and B = two stimulus words under exploration

$AA_{X(A \rightarrow B)}$ = associative affinity of stimulus A to stimulus B, based on group (culture) X

identical A-associates to B = direct elicitation + associations in common

direct elicitation = amount to which stimulus word A elicits stimulus word B

associations in common = amount to which associates of stimulus words A and B are identical

When calculating the index of intracultural associative affinity in the opposite direction, the following appropriate changes in the formula are made:

$$\text{Intracultural index } AA_{X(B \rightarrow A)} = \frac{\Sigma \text{identical B-associates to A}}{\Sigma \text{B-associates}} \cdot 1{,}000$$

By indexes of intracultural associative affinity, the relationship of one stimulus word to another with respect to a particular group can be measured. By indexes of intercultural associative affinity, the relationship of one group to another with respect to a particular stimulus word can be measured. In the index of intercultural associative affinity, there is no direct elicitation. Hence, the resulting formula is simpler.

$$\text{Intercultural index } AA_{A(X \rightarrow Y)} = \frac{\Sigma \text{X-associates in common with Y}}{\Sigma \text{X-associates}} \cdot 1{,}000$$

where: X and Y = two groups being compared with respect to a particular stimulus word

$AA_{A(X \rightarrow Y)}$ = associative affinity of group X to group Y with respect to stimulus A

X-associates in common with Y = amount to which associates of group X and group Y are identical

When calculating the index of intercultural associative affinity in the opposite direction, the following appropriate changes in the formula are made:

$$\text{Intercultural index } AA_{A(Y \rightarrow X)} = \frac{\Sigma \text{Y-associates in common with X}}{\Sigma \text{Y-associates}} \cdot 1{,}000$$

Indexes may be calculated from the response frequencies or from the response scores. The rationale outlined in connection with the scoring (Scoring System and Its Theoretical Rationale) suggests that the indexes response scores provide more exact data for such calculations.

VERBAL ACCIDENTALS VERSUS CULTURAL CONSTANTS

For methodological reasons it is important to make a somewhat artificial distinction between cultural reality (in the psychological sense: cultural perception, cognitive organization, value orientation, etc.) and verbal behavior. It does not

irply a negation of verbal behavior as a substantial constituent of cultural behavior. In the context of the present investigations it is important to explore whether the usefulness of the Associative Group Analysis is limited merely to the quantification of verbal behavior, or if it may also be used to explore cultural reality in a broader and psychologically more fundamental sense.

When associations are spoken of as verbal connections, it is their mechanical, accidental character that usually gets emphasis, rather than the underlying relationships determined by content and context. When interpreted on the basis of propinquity, contiguity, and common occurrence, the associations are perceived as more or less temporary mechanical connections unaffected by meaning and context. This logic would suggest that group response patterns reflect verbal habit and language-determined peculiarities, but otherwise they have no practical bearing on cultural experience and reality.

There is an abundance of literature on the verbal habit aspect of associations, and the overemphasis on this aspect makes it necessary to consider the problem in more detail.

Let us take the following example. There exists an English idiom, round table, which has a partially corresponding French idiom, table ronde. The relatively high frequency of occurrence of each idiom creates a verbal connection between table and round. The resulting connection is overwhelmingly in one direction: the first component of the idiom easily elicits the second part, but the bond is not so strong in the opposite direction. Thus the corresponding associative connections, based on verbal habits in English and French, are not identical. They may be equally strong, but they are opposite in direction. On the basis of their language experiences, English speakers are more disposed to respond with table to the stimulus round then French speakers are. On the other hand, French speakers are more disposed to respond

with ronde to the stimulus table. Comparing the data on U.S. subjects,[19] and on French subjects,[20] it appears that although .02% of the U.S. subjects gave round as a first response to table, .23% of the French subjects responded with ronde. The great frequency of ronde in French is in this context a matter of verbal habits.

In this case it is obvious that the high response frequency of round to table in French, as well as the relatively high response frequency of table to round in English, are due to the linguistic peculiarities of the respective languages. They represent, par excellence, verbally conditioned associative connections, since the differences in associations can not be explained by cultural differences in milieu and experience. They are not due to culturally conditioned meaning, or images, based on different experiences. They do not occur because, for example, tables of round shape are more frequent in France than in the United States. French people are not more likely to think of roundness when they think of table than people of the United States. The high frequency of the response round to table represents established French verbal habits resulting from word sequence, producing a strong associative connection in a table-to-round direction.

Although the word sequence is not necessarily a matter of chance from the linguistic viewpoint, it is certainly accidental from the cultural viewpoint. It is independent of culturally conditioned perception, values, taste, etc., that is, from the main factors constituting cultural reality. Should the verbal associations obtained in the present investigations overwhelmingly represent similar, merely

19. Russell and Jenkins, Minnesota Norms (Tech. Rept. 11; Minneapolis: University of Minnesota: 1954).

20. M.R. Rosenzweig, "Word Associations of French Workmen: Comparisons with Associations of French Students and American Workmen and Students," Journal of Verbal Learning and Verbal Behavior, 3 (1964), 57-69.

verbally conditioned, connections, the pattern differences would represent only linguistically conditioned differences. In this case associative responses would give little if any foundation for cultural analysis. Data obtained from the experiments give numerous examples that this is not the case. Morphologically different but semantically related stimuli (for example, hungry, food, rice, to eat) gave similar group response patterns with the cultural groups investigated. This would not happen if solely verbal habits were eliciting associations. Furthermore, there are other indications that the reference content of the word stimuli represents the main determinant of the response patterns within a particular cultural group (see chapter III). The opinion of the cultural anthropologists asked to interpret data in regard to the cultural relevance are also unequivocal in this respect (see Summaries of Cultural Expert's Opinions).

STATISTICAL SIGNIFICANCE OF ASSOCIATIVE DATA

In order to increase the readability of the report, we did not elaborate on the problem of the statistical significance of cultural differences presented throughout the text.

In the following portion, we will attempt to handle this problem in the form of a summary. The summary supplies some approximate figures and discusses various examples of their utility. Of course, the variety of possibly meaningful intercomparisons is immense, relating potentially to each and every item.

The probability problem inherent in associations is a complex one, and the following approaches merely represent preferred alternatives which must be utilized with caution.

We have three main categories of significance problems which are closely related to the present investigation.

A. Single Item Proportion As the first logical question, it may be asked: "Is a particular response, obtained by frequency or score, a significant response in view of the relative proportions?" In other words, is it a response which, on a statistical basis, can be considered to represent a characteristic response for this group? For example, can the response poor (score: 43, frequency: 12) to the stimulus hungry by the U. S. group be seen as a mere matter of chance, or is it a statistically significant event?

We do not have an appropriate, powerful statistical test to solve the problem. We may, however, utilize one of the following options. Ordering the lists according to decreasing proportions, we may conclude that the responses in the upper 5 percent of the list represent items within the 5 percent significance limit, regardless of their absolute score or frequency values. Accordingly, since the U. S. Group Response List contains 177 items,

the first eight items can be looked at as being characterized by $p < 0.05$ to represent a chance event in a non-parametric sense. The response poor to the stimulus hungry is among the highest scoring 5 percent of responses.

In a different approach, the significance of a particular score can be tested by the "t" test. This test assumes a normal distribution of the score values. First, the difference of this particular score (43) from the average score value (6.3) is to be calculated. This difference has to be divided by the standard deviation of the distribution of response scores. In the case of the selected instance, poor (score: 43), a "t" value ($t = 1.87$) is obtained, which is significant at the 5 percent level in a one-tailed test.

B. Intralist Differences of Response Proportions A question of substantially greater practical importance is represented by the problem of significant intralist differences. It may be asked, for instance, "Do the responses money and starve (scores: 14 and 59) represent responses characterized by significantly different response proportions?" Significantly different response proportions would suggest that, in the context of intralist differences, two items have effectively different importance for the group under consideration.

To test this type of difference, the "t" test provides a convenient tool based on the sample differences:

$$t = \frac{\bar{D}}{\sigma_{\bar{D}}}$$

Where: $\bar{D}$ = Mean (across members of the group) of differences of individual

$\sigma_{\bar{D}}$ = The standard error of the mean of differences

$$= \frac{\text{standard deviation of the differences}}{\sqrt{N-1}}$$

The responses money and starve (scores: 14 and 59) yield a "t" value of 2.46,

indicating a highly significant difference ($p < .01$). Applying this test to the intralist (intracultural) differences, the following significance values are obtained as presented in the next table.

Table A-1

Intralist Differences, "t" Values and Level of Significance Based on U. S. Responses to Hungry

RESPONSES		RESPONSE SCORES OBTAINED		RESPONSE SCORE DIFFERENCE	VALUES	LEVEL OF SIGNIFICANCE
A	B	A	B			p
1. STARVE	MONEY	59	14	45	3.46	< 0.01
2. STARVE	PEOPLE	59	18	41	2.82	< 0.01
3. STOMACH	MONEY	52	14	38	2.81	< 0.01
4. POOR	MONEY	43	14	29	2.63	< 0.01
5. POOR	DIET	43	16	27	2.25	< 0.05
6. POOR	PEOPLE	43	18	25	2.00	< 0.05
7. ORPHAN	CHILD	0	15	15	2.00	< 0.05
8. RICE	MEAT	3	15	12	1.60	not significant
9. STARVE	EAT	59	76	17	1.21	" "
10. DIET	PAIN	16	27	11	1.10	" "

In order to supply further examples, similar series of intralist differences are presented in the following table showing the Korean responses to hungry.

Table A-2
Intralist Differences, "t" Values and Level of Significance based on Korean Responses to Hungry

RESPONSES		RESPONSE SCORE OBTAINED		RESPONSE SCORE DIFFERENCE	VALUES	LEVEL OF SIGNIFICANCE
A	B	A	B			p
STARVE	MONEY		40	40	3.64	<0.01
STARVE	PEOPLE		23	23	2.19	<0.05
STOMACH	MONEY	11	40	29	2.52	<0.06
POOR	MONEY	28	40	12	.83	not significant
POOR	DIET	28	0	28	2.43	<0.05
ORPHAN	CHILD	22	11	11	1.00	not significant
RICE	MEAT	44	11	33	2.64	<0.01
STARVE	RAT		13	13	2.00	<0.05
DIET	PAIN		10	10	1.43	not significant
MONEY	PAIN	40	10	30	2.61	<0.01

To the extent that these tables suggest a general rule, it appears that score differences of ca 30 or larger imply high statistical significance, while differences of ca 20 or larger imply significance at the 0.05 probability level.

C. Significance of Interlingual Responses Differences From the viewpoint of intercultural comparisons, the most frequent and most relevant question is whether or not the same response obtained from two different cultural groups with different response scores represents responses characterized by significantly different scores. In the context of intercultural comparisons, the occurrence of significantly different scores suggests that the groups effectively differ in their response dispositions.

Comparing the U. S. and Korean responses to the stimulus word hungry, the U. S. group gives to eat with a score of 76, and the Korean group gives a lower score of 17 in using this response. The question is, then, "Is this difference a significant one, warranting the conclusion that the U. S. group effectively differs from the Korean group in giving more to eat responses to hungry?"

An appropriate form of the "t" test may be used to test differences between scores from uncorrelated samples. In the formula below, this test is expressed as the "t" test for differences between mean scores across persons:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{\bar{s}}{N} + \frac{\bar{s}}{N}}}$$

Thus, we obtain a t- for the U. S. - Korean response differences discussed, indicating a chance probability $p < 0.01$.

In order to provide some examples reflecting the relationship between the size of intergroup score differences and the significance values obtained by the "t" test, the following table is used presenting instances based on the

comparison of U. S. and Korean responses obtained to hungry.

Table A-3

Interlist Differences, "t" Values and Level of Significance

(A Comparison of U.S. and Korean Response Proportions to Hungry)

Response Word	Scores		Score Difference	"t" Value Obtained	Level of Significance
	US	K			
Starve	59	0	59	4.35	< 0.01
Eat	76	13	63	3.87	< 0.01
Orphan	0	22	22	2.25	< 0.05
Money	14	40	26	2.08	< 0.05
Pain	10	27	17	1.52	not significant
Diet	16	0	16	1.40	" "
Poor	43	28	15	.87	" "
Hamburger	8	0	8	.85	" "
People	18	23	5	.61	" "
Child	15	11	4	.40	" "

The data of this table suggest that intergroup score differences of about 20 or larger are, in general, significant at the 0.05 level, and differences of about 30 or larger are significant at the 0.01 level.

D. Intercultural Comparisons of Intracultural Association Affinity Indexes

In the intercultural context, comparison between indexes based on response scores may be desired. The approach used for this purpose is based on the application of the "z" test of the significance of differences between proportions.

$$z = \frac{P_1 - P_2}{\sqrt{\bar{q}\,\bar{p}\,\frac{N_1 + N_2}{N_1 N_2}}}$$

To avoid separate calculations of significance values for each comparison, N_1 and N_2 were assumed to be equal and of a magnitude met by most of the group responses. The calculations were based accordingly on the selected figure for N of 240. It was found that index differences equal to or larger than 83 are significant at the .01 level and differences equal to or larger than 55 are significant at the .05 level. Again it should be stressed that these figures are crude approximations permitting only general assessment of the differences since precise figures vary according to the number of group responses obtained.

It should be pointed out that this test is based on the assumption of independent observations. As usually more than one response is obtained from each person in these experiments, it is legitimate to question whether the responses are effectively independent. In this context it may be mentioned that according to the results of various investigations the individual response hierarchies generally parallel collective response hierarchies. Laffal concludes, for instance, that:

"The major conclusion to be drawn from these results is that the word category structure obtained by the method of single word association is substantially similar to that obtained by the method of continuous word association."*

* Laffal, Julius. "The Structure of Single Word and Continuous Word Associations," Journal of Verbal Learning and Verbal Behavior, 1, (1962) 54-61

In other words this suggests that one hundred people giving 10 responses each approximate the results obtained from 1,000 individuals giving one response apiece. Therefore a difference resulting from the correlatedness of the personal responses is within tolerable limits.

With these conditions in mind, the significance values obtained in connection with the association affinity indexes require special caution. A future objective is to find ways of statistical testing which are better adjusted to this task.

SUMMARIES OF CULTURAL EXPERTS' OPINIONS

Miss Lucile Cohen, Catholic University, Washington, D. C., a cultural anthropologist and Colombian area specialist wrote:

"In this section, the anthropologist has given information on the cultural content of frequent associations made to the four stimulus words: eat, hungry, rice, food.

"Viewed in cultural context, the responses appear to be, for the most part, typical of a group of educated Colombians, some of whom may be in transition towards a cosmopolitan role, by virtue of their intercultural contacts. Nevertheless, informants show a core of responses common to Colombia.

"The associations made by the American group parallel cultural preferences of typical members of such age groups in the national American culture.

"Our concern with the content of associations made in the Colombian and American samples leads us to consider possible implications of such findings for cross-cultural communication. Such knowledge may be fruitfully used for the promotion of more effective cross-cultural communication. It may also be used for preparation of training programs for overseas bound personnel of either country (Colombia or the United States).

"While the literature shows that anthropologists and psychologists have not undertaken extensive collaboration in the study of word association and cultural content, this experience highlights the need to study in greater depth this method and its effects."

Dr. Chungnun Han, formerly a researcher at Massachusetts Institute of Technology, cultural anthropologist, Korean area specialist wrote:

"From the viewpoint of the cultural anthropologist the present comparative explorations based on associations are interesting in that they give opportunities

to help to determine the relative role of culture, synonymous with tradition, social values, etc., on verbal responses. The following are some provisional generalizations reached.

" (I) In general the responses to the same stimulus word of the Americans and the Koreans are usually different; the Korean responses are heavily influenced by the Korean culture; the American responses by the American culture.

"(II) The degree of differences between the two groups are dependent on, first the nature of the culture involved; second, the nature of the stimulus word used. The stimulus word rice sharpens the differences between the American and Korean responses. Rice is one of the most important elements of the Korean culture and not so important to the Americans. Although to eat or food are common experience words to both the Americans and Koreans alike, the Korean responses reflect more the Korean traditions than the American responses do. This result is probably due to the fact that the Korean culture is old and their value system is based primarily on belief rather than on scientific knowledge.

"(III) The verbal responses are conditioned at least partially by cultural background of the persons tested.

"Generalizations stated above are results of examinations of responses to four stimuli words; to eat, food, hungry, and rice. It is apparent that the number of stimuli examined are not numerous enough to make reasonable generalizations. Therefore in order to come to firmer conclusions, study of many more stimuli words is necessary."

ANNEX B: DATA IN DETAIL

PARAMETERS OF GROUP RESPONSE LISTS

Note to Table B1

Stimulus words: Forty-eight stimulus words were administered in the free association task. The results presented in this report are based on only 36 stimulus words; reference spheres II, V, and VIII were omitted in view of the abundance of material obtained.

Number of different response words: The number of different words given to a specific stimulus word by a particular group.

Number of responses: The total number of responses given by a group. This measure is analogous to Nobel's measure of "meaningfulness"[21] adapted to the tasks of group investigations to indicate the cultural relevance of the various stimulus words.

Total score: The sum of scores of individual responses from a particular group to a particular stimulus (see Scoring System and Its Theoretical Rationale, annex A).

Degree of centering: The degree of agreement and uniformity of the groups' reactions to a particular stimulus. The figures represent the relative proportions of frequent responses obtained by dividing the responses with score 10 and over by the total score.

Rank: The relative cultural meaningfulness of various stimulus words based on the total number of responses obtained from the group.

COMPARATIVE GROUP RESPONSE LISTS

Tables B2-B5 show to what extent similar responses are obtained from different groups in respect to the same stimulus. Infrequent responses

21. C.E. Nobel, "An Analysis of Meaning," Psychological Review, 59 (1952), 421-430.

Table B 1. Parameters of Group Response Lists

Stimulus Word	Number of Different Response Words			Number of Responses			Total Score			Degree of Centering, %			Rank		
	U.S.	Korean	Colombian	U.S.	Korean	Colombian	U.S.	Korean	Colombian	U.S.	Korean	Colombian	U.S.	Korean	Colombian
Hungry	173	165	156	385	327	379	1,348	1,340	1,218	58	54	50	14	5	17
Rice	168	142	129	298	373	366	1,309	1,325	1,006	65	66	55	13	2	5
Food	225	128	182	456	310	435	1,453	1,196	1,348	56	63	64	4	13	3
To eat	191	127	174	448	318	434	1,488	1,205	1,440	58	66	62	6	11	4
Poor	182	163	190	381	308	368	1,192	1,189	1,280	51	56	60	17	14	19
Money	218	156	191	450	279	442	1,433	1,044	1,455	56	54	60	3	34	2
Beggar	200	143	152	421	298	156	1,431	1,328	1,287	58	60	62	8	16	11
To desire	183	114	150	383	308	224	1,306	840	1,182	61	54	55	15	[illegible]	30
Filial	100	175	115	186	290	256	771	1,185	673	40	44	61	36	23	33
Family	177	139	162	400	363	378	1,512	973	1,313	68	54	70	1	26	9
Ancestors	184	142	167	336	377	328	1,272	1,071	1,182	40	55	54	24	25	26
To respect	131	119	156	220	229	275	871	829	1,014	46	54	56	35	31	30
Educated	132	150	141	275	[illegible]	274	1,013	979	1,001	37	40	55	30	29	31
School	177	162	187	464	339	464	1,460	1,192	1,404	68	60	55	2	5	1
Knowledge	171	129	157	395	264	293	1,301	1,055	1,035	69	57	51	12	28	27
To learn	191	159	184	434	325	403	1,465	1,211	1,370	61	58	55	7	9	7
Proud	166	174	178	250	274	273	947	1,056	1,058	39	41	42	34	26	32
Honor	189	150	184	267	291	332	1,029	1,160	1,224	41	55	46	31	30	16
Offense	168	137	174	346	187	280	1,234	792	1,088	51	27	66	21	36	28
To revenge	176	159	168	254	47	325	993	968	1,219	38	41	53	32	20	19
Immortal	180	147	158	290	244	293	1,095	978	1,113	45	49	52	29	31	21
Faith	158	147	153	339	336	281	1,309	1,268	1,046	66	63	[illegible]	23	6	29
Heaven	183	143	187	419	333	406	1,413	1,177	1,290	61	65	58	19	10	6
To worship	178	124	172	350	311	333	1,181	1,067	1,218	52	66	56	16	12	15
Financial	222	166	179	400	401	330	1,376	1,104	1,225	51	46	36	12	1	14
Business	229	173	190	368	323	342	1,216	1,137	1,144	38	48	44	18	18	13
Capitalism	200	162	188	381	284	328	1,303	1,130	1,299	48	66	51	16	17	18
To trade	185	177	197	434	291	332	1,363	1,116	1,250	53	43	50	8	21	8
Social	223	176	207	419	228	234	1,486	1,000	1,089	58	43	40	[illegible]	31	14
Equality	170	146	203	318	276	300	1,182	1,000	1,020	60	51	37	20	27	29
Socialism	204	133	172	347	217	234	1,225	874	1,081	62	48	44	28	33	[illegible]
To cooperate	173	130	176	243	348	258	945	1,431	1,190	30	65	40	34	3	24
Political	182	191	202	344	283	322	1,277	1,081	1,103	60	42	63	23	19	21
Power	220	181	195	337	301	416	1,236	1,172	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Communism	220	192	188	415	358	341	1,260	1,290	1,244	48	50	58	11	4	13
To rule	184	172	299	335	194	317	1,166	1,111	1,125	61	49	39	38	18	22

Table B 2. Comparative Lists of Frequent Responses to Hungry

U.S. Group as Basis of Comparison				Korean Group as Basis of Comparison				Colombian Group as Basis of Comparison			
Response	Scores			Response	Scores			Response	Scores		
	U.S	Korean	Colombian		Korean	Colombian	U.S.		Colombian	U.S.	Korean
Food	239	51	73	Cooked rice	197			Meal	107		
Eat	76	53	9	Beggar	106	63	11	Food	73	239	51
Thirsty	61		29	Food	51	73	239	Hunger	66	10	26
Starve	50	6	29	Poverty	46	38		Poor	50	43	28
Stomach	52	11	12	Rice	44		3	Beggar	43	11	106
Poor	43	28	50	Money	40	36	14	Poverty	36		46
Pain/painful	27	10	6	People/person	35		10	Money	36	14	40
People/person	13	35		Poor	28	50	43	Bread	35	9	8
Famished	10	2		Pitiful	27	3	3	Starving	29	50	4
Needy	17		8	War	26		1	Thirsty	29	61	
Diet	16		3	Children	23	5	15	Work	27		8
Child(ren)	15	23	5	Orphanage	22			Necessity	18		
Meat	15	11	11	Hunger	14	65	10	Desperate	17	3	2
Money	14	46	36	Eat	13	9	76	Thin	17	9	
Always	14			Time	12	3		Man	15	1	
Cake/pie	12			Stomach	11	12	52	Misery	13		
Tired	11	6	3	Meat	11	11	15	Rich(ness)	12		
Help	11			Soup	10	3		Stomach	12	52	11
Commercials	11			Sympathy	10			Meat	11	15	11
Cook	11			Poor people	10		3	Laziness	11		7
Beggar	11	106	43	Must eat	10			Fast	11		4
Desire	10	5	9	Life	10			Lack appetite	11	3	
Skoul	10	4	2	Painful	10	6	27	Dog	11		4
Suffering	10	8	5					Death	10	7	6
Hunger	10	14	65					Lacking	10	3	5
Hurt	10							Dessert	10	3	
Hungary	10										
Total U.S. score			783	Total Korean score			670	Total Colombian score			730
Total scores in common				Total scores in common				Total scores in common			
U.S. and Korean			221	Korean and Colombian			261	Colombian and U.S.			264
U.S. and Colombian			252	Korean and U.S.			307	Colombian and Korean			217

Frequent responses are those with a score of 10 or over.

Table B 3. Comparative Lists of Frequent Responses to Educated

U.S. Group as Basis of Comparison				Korean Group as Basis of Comparison				Colombian Group as Basis of Comparison			
Response	Scores			Response	Scores			Response	Scores		
	U.S.	Korean	Colombian		Korean	Colombian	U.S.		Colombian	U.S.	Korean
Learned	89	3	13	Knowledge	50	19	44	College	81	47	6
School	56	47	22	School	47	22	56	Politeness	65		
Intelligent	52	18	20	Teacher	35	13	20	University	43	5	5
College	47	6	61	Leader	31			Study	33	9	9
Knowledge	44	50	19	Respect	30	10		Polite	30	5	7
Professor	42	10	26	Student	29	7	6	Manners	28		
Books	31	7	13	Intellectual	20		13	School	22	56	47
Knowledgeable	30	21	13	Personality	24			Education	22		5
Teacher	30	31	13	People/person	24	4	14	Family	21		
Wise	19	5	5	Knowledgeable	21		12	Professor	20	48	20
Man	18	4	4	Human being	21			Intelligent	20	52	19
Schooled	17			Scholar	19		12	Knowledge	15	44	20
Graduate	17	3		Intelligence	19	20	52	Fine	1[illegible]		
Well rounded	17			Become a good person	17			Decent	1[illegible]		
Smart	16			Dignified	15	3		Polite	1[illegible]		
People/person	14	24	4	Gentlemen	14	8		Culture	1[illegible]		3
Intellect	13	28		Refined	12	12		Books	12	31	7
Scholarly	12	16		Ability	11		3	Teacher	12	39	[illegible]
Cause	12			College professor	10	20	62	Learned	13	89	3
Taught	10							Pupil	12		
								Mother	12		3
								Refined	12		12
								Example	12		
								Parents	11	1	
								Amiable	11		
Total U.S. score			576	Total Korean score			466	Total Colombian score			571
Total scores in common				Total scores in common				Total scores in common			
U.S. and Korean			229	Korean and Colombian			127	Colombian and U.S.			117
U.S. and Colombian			199	Korean and U.S.			211	Colombian and Korean			143

Frequent responses are those with a score of 10 or over.

Table B 4 Comparative Lists of Frequent Responses to Poor

U.S. Group as Basis of Comparison

Response	Scores: U.S.	Korean	Colombian
Poverty/poor	96	24	44
Rich	62		3
Money/no money	55	21	18
Hungry	45	44	77
Shame	37	5	3
Need	35		2
Bad	31		
Beg/beggar	30	74	30
Starvation	20	11	6
Wealth	16	26	9
Destitute	19		11
Sickness	15	5	12
Ragged clothes	14	10	25
Unfortunate	14		5
Dirty	14	29	4
Help	12	21	7
Indigent	14		
Unhappiness	13		14
Lonely	11		
Lack	11		30
People	11	31	
Children	10	2	6
Striving	10		
Broke	10		
Food	10	6	12
Impoverished	10		4
Low	10		
Total U.S. score			630
Total scores in common			
U.S. and Korean			216
U.S. and Colombian			254

Korean Group as Basis of Comparison

Response	Scores: Korean	U.S.	Colombian
Beggar/beg	74	30	30
Pitiful	53	6	3
Money	51	71	
Hunger	44	77	45
Farmers	32		
Person/poor ...	31		11
Dirty	29	4	14
Korean people	27		
Wealthy	26	9	19
Hardship	23		
Poverty	24	44	96
Help/assistance	21	7	14
Without money	21	10	55
Sympathy	17		
Tragic	17	3	
Economic	16	12	
Korea	16		
Without clothes	15		4
Difficulty	14	3	
Inferior nation	14		
Nation	12		
Rice	13		2
Aid	11	6	2
Starvation	11	6	20
Effect	11		
Maltreatment	10		
Laborer	10		6
Rural area	10		
Torn clothes	10	25	14
Total Korean score			664
Total scores in common			
Korean and Colombian			230
Korean and U.S.			216

Colombian Group as Basis of Comparison

Response	Scores: Colombian	U.S.	Korean
Hungry	[illegible]	45	[illegible]
Money	71		[illegible]
Poverty	44	96	[illegible]
Beggar	[illegible]	30	74
Necessity	[illegible]		
House	[illegible]	[illegible]	[illegible]
Spirit/Holy Spirit	[illegible]		
Ragged	[illegible]	14	10
Naked/nude	[illegible]		
Sadness	[illegible]	6	[illegible]
Powerless	22	5	
Work	21	[illegible]	
To me...	30	[illegible]	
Thieves	[illegible]		
Misery	[illegible]		
Humility	[illegible]		
Man	14	[illegible]	[illegible]
Scarcity	[illegible]		
Cold	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	
Sickness	12	[illegible]	[illegible]
Food	[illegible]	[illegible]	[illegible]
Economy	[illegible]		[illegible]
Clothing	[illegible]	[illegible]	[illegible]
Destitute	[illegible]	[illegible]	
Easy	[illegible]		
Without money	[illegible]	[illegible]	[illegible]
Total Colombian score			[illegible]
Total scores in common			
Colombian and U.S.			[illegible]
Colombian and Korean			[illegible]

Frequent responses are those with a score of 10 or over.

Table B 5. Comparative Lists of Frequent Responses to Filial

U.S. Group as Basis of Comparison				Korean Group as Basis of Comparison				Colombian Group as Basis of Comparison			
Response	Scores			Response	Scores			Response	Scores		
	U.S.	Korean	Colombian		Korean	Colombian	U.S.		Colombian	U.S.	Korean
Family	40	10	36	Parents	131	44	10	Love	96	55	13
Brother	40		60	Filial son	64			Father	75	35	6
Father	35	9	75	Children	41	30	3	Brothers	60	45	
Relationship	34			Son	32		32	Affection	47		
Love	23	13	95	To respect	28	5	12	Mother	46	7	16
Friend	24	5	2	Filial acts	18			Parents	44	16	131
Sister	22			Duty	17	3		Family	25	40	10
Son	22	32		Good	17	6		Home	22	2	3
Close	20			Mother	16	4	7	Respect	22		
Parents	18	101	44	Shim Cheng	14			Children	20	3	41
Relation	14		2	Love	13	96	32	Home	15		
Association	14		3	Confucianism	13			Daughters	15	9	13
Respect	13	20	5	Daughter	12	15	9	Affectionate	13		
Loyal	11		9	Great	13			Union	12		
				Virtue	13			House	11		
				Ancestor	12			Familiar	11		
				Courtesy	12			Club	11		
				Oriental	11						
				Stories	11						
				Moral	11						
				Family	10						
				Morality	10						
Total U.S. score			547	Total Korean score			401	Total Colombian score			589
Total scores in common				Total scores in common				Total scores in common			
U.S. and Korean			69	Korean and Colombian			134	Colombian and U.S.			142
U.S. and Colombian			187	Korean and U.S.			85	Colombian and Korean			133

Frequent responses are those with a score of 10 or over.

(score 9 and below) are not included.

At the bottom of each section three totals are given. The first is the total of the first column of each section (the total U.S. scores, where the U.S. group is the basis of comparison, the total Korean scores, where the Korean group is the basis of comparison, etc.) and is a simple sum of the response items listed. The two remaining totals are the total scores in common. The score in common for two groups to a single item is the smaller of the two scores. Total scores in common is the total of these, that is, the total of the smaller of the response scores of two groups to each item.

An example can be taken from table B2, with the U.S. group as the basis of comparison. In totaling the scores in common for the Korean and U.S. groups, for the first seven response items the scores for the U.S. group are higher. Therefore the Korean responses are used as the scores in common. However, for the eighth response, people/person, the Korean score, 35, exceeds the U.S. score, 18. The score in common, 18 instead of 35, is used in calculating the final sum.

INDEXES OF INTERCULTURAL ASSOCIATIVE AFFINITY

The formula given in annex A (Concept of Associative Affinity) is used in calculating indexes. The calculation is based on response scores in agreement with the rationale described in annex A (Scoring System and Its Theoretical Rationale). Tables B6-B9 present the indexes of intercultural associative affinity obtained for the three cultural groups in respect to the 36 words evaluated.

Table B 6. Indexes of Inter-Word Associative Affinity for Reference Spheres I and III

	Indexes for Reference Sphere I					Indexes for Reference Sphere III				
	Stimulus words				Average	Stimulus words				Average
	Hungry	Rice	Food	To eat		Poor	Money	Beggar	To desire	
U.S. to Koreans	347	233	276	291	262	232	245	230	186	258
Koreans to U.S.	268	237	336	362		252	348	253	280	
U.S. to Colombians	307	326	333	366	354	286	367	345	267	329
Colombians to U.S.	339	360	356	394		287	396	364	253	
Koreans to Colombians	330	184	343	434	317	284	377	253	252	342
Colombians to Koreans	336	224	324	363		262	260	222	178	
Index averages for stimuli	365	266	329	372		287	334	287	244	
Index averages for reference spheres					318					303

Table B 7. Indexes of Intercultural Associative Affinity for Reference Spheres IV and VI

	Indexes for Reference Sphere IV					Indexes for Reference Sphere VI				
	Stimulus words				Average	Stimulus words				Average
	Educated	School	Knowledge	To learn		Filial	Family	Ancestors	To respect	
U.S. to Korean	291	424	285	297	357	301	268	145	193	227
Korean to U.S.	304	526	373	350		209	418	173	188	
U.S. to Colombian	296	368	254	356	338	440	505	257	283	362
Colombian to U.S.	302	387	343	379		340	641	211	226	
Korean to Colombian	236	440	223	310	266	256	455	189	166	247
Colombian to Korean	329	354	227	273		253	337	153	148	
Index averages for stimuli	277	430	285	328		266	428	196	197	
Index averages for reference spheres					327					362

Table B 8. Indexes of Intercultural Associative Affinity for Reference Spheres VII and IX

	Indexes for Reference Sphere VII					Indexes for Reference Sphere IX				
	Stimulus words				Average	Stimulus words				Average
	Friend	Honor	Offense	To respect		Immortal	Faith	Heaven	To worship	
U.S. to Korean	900	156	60	61	125	131	377	322	100	264
Korean to U.S.	100	143	93	63		147	390	300	187	
U.S. to Colombian	104	205	14	171	133	257	318	318	324	316
Colombian to U.S.	164	172	18	139		252	430	342	314	
Korean to Colombian	116	160	93	164	125	196	369	232	148	303
Colombian to Korean	116	149	96	133		145	336	212	123	
Index averages for stimuli	100	188	87	129		183	347	301	211	
Index averages for reference spheres					129					369

Table B 9. Indexes of Intercultural Associative Affinity for Reference Spheres X, XI, and XII

	Indexes for Reference Sphere X					Indexes for Reference Sphere XI					Indexes for Reference Sphere XII				
	Stimulus words				Average	Stimulus words				Average	Stimulus words				Average
	Financial	Business	Capitalism	To trade		Social	Equality	Socialism	To cooperate		Political	Power	Communism	To rule	
U. S. to Kerana	147	243	271	147	221	133	149	273	175	203	181	148	299	219	213
Kerana to U. S.	195	271	311	167		175	178	282	180		167	160	214	239	
U. S. to Colombitan	233	286	266	211	245	278	184	237	228	230	228	185	250	167	227
Colombitan to U. S.	257	279	267	214		235	205	256	181		242	189	234	176	
Kerana to Colombitan	190	173	230	148	184	191	166	233	283	195	165	180	218	139	175
Colombitan to Kerana	168	166	182	84		186	147	179	219		150	170	230	138	
Index averages for stimuli	200	234	254	158		209	172	260	202		187	173	231	179	
Index averages for reference spheres					211					211					206

INDEXES OF INTRACULTURAL ASSOCIATIVE AFFINITY

The formula given in annex A (Concept of Associative Affinity) is used in calculating indexes. The calculation is based on response scores in agreement with the rationale described in annex A (Scoring System and Its Theoretical Rationale). Tables B10-B15 present the indexes of intracultural associative affinity obtained for the three cultural groups in respect to the 36 words evaluated. Indexes are given for all possible combinations of words within each table.

COMPARISON OF INTERCULTURAL RESPONSES BY CONTENT CATEGORY

Tables B16-B24 present the results of content analysis of the responses of the three cultural groups in respect to particular stimulus words. The characteristics of the responses were the basis in selecting content categories. The content categories vary from one word to another; however, the same content categories were used for the responses of the three groups to each particular stimulus word.

The data presented are based on the response scores obtained from each group in the various content categories. In order to facilitate the identification of the response categories characterized by sizable differences, the figures of intercultural score differences over 30 are presented.

At the bottom of each table are the main response items given in common by two different cultural groups.

Table B 16. Indexes of Intracultural Associative Affinity for Reference Spheres I and III

Stimulus Words A	Stimulus Words B															
	Poor		Money		Beggar		To desire		To eat		Rice		Food		Hungry	
	A-B	B-A	A-B	B-A	A-B	B-A	A-B	B-A	A-B	B-A	A-B	B-A	A-B	B-A	A-B	B-A
Hungry																
U.S.	326	310	68	80	165	165	114	119	427	412	135	106	466	346		
Korean	363	362	136	111	342	306	69	121	337	409	205	238	362	238		
Colombian	416	363	195	148	370	390	168	162	304	296	229	257	342	357		
Food																
U.S.	80	82	54	72	83	48	60	77	561	529	124	176				
Korean	109	113	78	73	114	117	25	80	484	508	312	380				
Colombian	135	121	128	119	83	87	86	63	534	573	303	380				
Rice																
U.S.	80	80	86	53	62	57	45	44	149	127						
Korean	125	181	76	86	84	71	36	60	287	397						
Colombian	82	84	83	62	63	85	27	33	304	270						
To eat																
U.S.	90	91	82	62	71	73	86	99								
Korean	136	140	85	83	110	118	46	65								
Colombian	136	162	119	128	121	140	117	141								
To desire																
U.S.	108	110	143	121	123	119										
Korean	160	186	200	128	113	84										
Colombian	109	101	135	127	83	77										
Beggar																
U.S.	265	315	141	91												
Korean	425	374	166	124												
Colombian	550	418	133	135												
Money																
U.S.	144	194														
Korean	190	207														
Colombian	199	278														
Poor																
Average index *																
U.S.	155	154	97	86	139	124	97	98	202	197	93	96	203	196	232	211
Korean	214	207	132	116	190	171	86	89	225	244	186	193	301	199	261	268
Colombian	231	213	147	142	165	207	102	101	229	243	163	160	226	233	239	269

A-B: affinity of stimulus word A to stimulus word B. B-A: affinity of stimulus word B to stimulus word A. In comparing the indexes of intracultural associative affinity among the three groups, a difference of $\geq$ 58 is generally significant at the 0.05 level and a difference of $\geq$ 83, at the 0.01 level.

* Average index of intracultural associative affinity for each word based on its interrelationships with the other seven.

Table D 11. Indexes of Intracultural Associative Affinity for Reference Spheres IV and VI

Stimulus Words A	Stimulus Words B: Educated A-B	Educated B-A	School A-B	School B-A	Knowledge A-B	Knowledge B-A	To learn A-B	To learn B-A	To respect A-B	To respect B-A	Ancestors A-B	Ancestors B-A	Family A-B	Family B-A	Filial A-B	Filial B-A
Filial																
U.S.	44	33	78	140	44	28	62	33	100	93	171	103	404	180		
Korean	121	138	83	49	79	82	95	87	201	200	158	143	210	229		
Colombian	129	113	96	87	43	40	68	46	221	221	182	150	580	391		
Family																
U.S.	25	39	101	103	43	49	55	51	86	138	101	168				
Korean	47	36	80	41	46	43	69	55	152	157	98	106				
Colombian	104	64	101	90	62	45	62	59	163	213	133	170				
Ancestors																
U.S.	24	42	26	22	28	24	31	27	76	99						
Korean	85	61	27	24	28	26	35	31	148	140						
Colombian	110	129	50	40	67	77	70	60	153	179						
To respect																
U.S.	67	71	84	49	80	51	90	64								
Korean	191	119	161	139	114	122	197	148								
Colombian	204	210	161	97	104	98	117	96								
To learn																
U.S.	237	260	443	442	421	501										
Korean	269	317	877	467	262	460										
Colombian	314	228	361	329	413	533										
Knowledge																
U.S.	271	271	626	396												
Korean	264	348	418	342												
Colombian	275	290	313	230												
School																
U.S.	367	217														
Korean	220	293														
Colombian	248	210														
Educated																
Average index *																
U.S.	154	143	211	201	184	197	197	218	98	91	66	69	117	104	122	72
Korean	174	114	[illegible]	157	[illegible]	443	232	224	173	183	78	79	96	94	135	131
Colombian	191	201	190	170	187	189	136	182	160	174	109	115	109	148	155	147

A-B: affinity of stimulus word A to stimulus word B. B-A: affinity of stimulus word B to stimulus word A. In comparing the indexes of intracultural associative affinity among the three groups, a difference of ≥ 50 is generally significant at the 0.05 level and a difference of ≥ [illegible], at the 0.01 level.

* Average index of intracultural associative affinity for each word based on its interrelationships with the other seven.

Table B 12. Indexes of Intracultural Associative Affinity for Reference Spheres VII and I[

Stimulus Words A	Stimulus Word B															
	To revenge		Offense		Honor		Proud		To worship		Faith		Heaven		Immortal	
	A-B	B-A	A-B	B-A	A-B	B-A	A-B	B-A	A-B	B-A	A-B	B-A	A-B	B-A	A-B	B-A
Immortal																
U.S.	31	34	15	13	56	61	36	40	169	187	171	144	221	157		
Korean	64	64	56	66	110	91	238	221	197	126	270	198	176	146		
Colombian	58	53	77	19	66	52	86	70	190	228	194	196	266	208		
Heaven																
U.S.	22	31	7	3	57	79	34	52	196	235	210	228				
Korean	31	27	7	10	23	24	28	42	421	366	308	303				
Colombian	33	38	33	41	86	87	49	65	165	187	206	243				
Faith																
U.S.	16	23	22	23	93	116	47	64	250	178						
Korean	50	68	27	43	114	116	107	132	276	202						
Colombian	64	46	61	60	108	92	62	64	287	256						
To worship																
U.S.	18	22	16	17	69	78	43	54								
Korean	28	30	22	28	28	28	47	47								
Colombian	79	78	80	90	103	96	62	72								
Proud																
U.S.	27	84	34	18	216	163										
Korean	40	43	32	69	292	224										
Colombian	100	87	103	97	164	139										
Honor																
U.S.	13	26	24	20												
Korean	48	66	63	91												
Colombian	72	92	62	81												
Offense																
U.S.	130	161														
Korean	223	180														
Colombian	318	281														
To revenge																
Average index *																
U.S.	31	50	33	16	77	78	61	64	99	134	116	133	106	112	100	118
Korean	74	71	50	70	97	90	116	113	23	118	164	152	129	147	153	146
Colombian	106	96	105	104	96	91	87	85	39	144	139	137	123	137	132	128

A-B: affinity of stimulus word A to stimulus word B. B-A, affinity of stimulus word B to stimulus word A. In comparing the indexes of intracultural associative affinity among the three groups, a difference of ≥ 55 is generally significant at the 0.05 level and a difference of ≥ 85, at the 0.01 level.

* Average index of intracultural associative affinity for each word based on its interrelationships with the other seven.

Table E 13. Indexes of Intracultural Associative Affinity for Reference Spheres X and XI

Stimulus Words A	Financial A-B	Financial B-A	Business A-B	Business B-A	Capitalism A-B	Capitalism B-A	To trade A-B	To trade B-A	Social A-B	Social B-A	Equality A-B	Equality B-A	Socialism A-B	Socialism B-A	To cooperate A-B	To cooperate B-A
To cooperate																
U.S.	78	82	85	74	71	62	40	44	186	180	40	44	63	61		
Korean	113	100	145	139	71	62	93	98	180	186	121	134	81	98		
Colombian	97	96	87	89	120	111	74	70	177	190	112	121	150	171		
Socialism																
U.S.	60	84	70	68	256	243	36	35	89	109	104	87				
Korean	69	83	87	49	250	182	109	89	164	163	181	231				
Colombian	129	112	100	92	335	349	95	74	231	303	189	193				
Equality																
U.S.	31	27	82	81	117	111	23	25	51	43						
Korean	79	72	93	82	147	111	85	76	157	179						
Colombian	117	102	109	105	177	150	62	86	131	167						
Social																
U.S.	57	58	56	87	70	63	35	40								
Korean	177	173	187	152	122	117	105	104								
Colombian	102	98	83	84	174	130	61	45								
To trade																
U.S.	104	113	122	151	144	147										
Korean	85	83	212	218	85	90										
Colombian	284	294	363	365	163	159										
Capitalism																
U.S.	219	212	210	209												
Korean	198	205	182	186												
Colombian	256	270	293	343												
Business																
U.S.	190	282														
Korean	143	135														
Colombian	442	404														
Financial																
Average index *																
U.S.	119	142	122	126	155	153	73	79	78	81	63	48	99	94	83	73
Korean	124	118	145	137	155	136	110	108	154	153	124	147	183	134	118	118
Colombian	222	198	211	212	214	219	155	162	138	148	132	129	174	148	116	121

A-B: affinity of stimulus word A to stimulus word B. B-A: affinity of stimulus word B to stimulus word A. In comparing the indexes of intracultural associative affinity among the three groups, a difference of $\geq$ 65 is generally significant at the 0.05 level and a difference of $\geq$ 81, at the 0.01 level.

* Average index of intracultural associative affinity for each word based on its interrelationships with the other seven.

Table b 14. Indexes of Intracultural Associative Affinity for Reference Spheres X and XII

Stimulus Words A	To rule A-B	To rule B-A	Communism A-B	Communism B-A	Power A-B	Power B-A	Political A-B	Political B-A	To trade A-B	To trade B-A	Capitalism A-B	Capitalism B-A	Business A-B	Business B-A	Financial A-B	Financial B-A
Financial																
U.S.	35	41	44	40	92	33	49	63	104	113	212	219	280	262		
Korean	75	75	63	53	115	104	135	138	65	63	205	198	180	140		
Colombian	84	84	47	47	81	89	75	81	278	282	270	256	443	404		
Business																
U.S.	[illegible]	34	53	47	67	62	66	60	208	215	300	210				
Korean	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				
Colombian	99	100	63	80	137	124	72	67	365	363	342	[illegible]				
Capitalism																
U.S.	[illegible]	92	174	142	89	97	117	127	147	144						
Korean	[illegible]	83	215	148	97	87	73	81	68	66						
Colombian	[illegible]	65	275	281	179	182	172	169	158	161						
To trade																
U.S.	74	30	36	33	33	34	30	27								
Korean	50	50	34	29	71	72	59	90								
Colombian	46	62	22	23	65	64	31	34								
Political																
U.S.	149	158	128	118	126	138										
Korean	281	292	108	90	242	242										
Colombian	134	139	171	171	201	177										
Power																
U.S.	188	214	128	115												
Korean	245	287	122	110												
Colombian	[illegible]	237	86	88												
Communism																
U.S.	117	117														
Korean	[illegible]	[illegible]														
Colombian	56	49														
To rule																
Average index *																
U.S.	90	94	97	87	[illegible]	102	93	96	83	85	147	147	132	204	163	111
Korean	[illegible]	130	93	82	147	149	151	151	91	89	116	125	133	132	119	113
Colombian	103	110	[illegible]	101	160	137	122	120	138	141	210	201	213	200	180	174

A-B: affinity of stimulus word A to stimulus word B. B-A: affinity of stimulus word B to stimulus word A. In comparing the indexes of intracultural associative affinity among the three groups, a difference of $\geq$ 55 is generally significant at the 0.05 level and a difference of $\geq$ 83, at the 0.01 level.

* Average index of intracultural associative affinity for each word based on its interrelationships with the other seven.

Table B 18. Indexes of Intracultural Associative Affinity for Reference Spheres XI and XII

Stimulus Words A	Stimulus Words B															
	To rule		Communism		Power		Political		To cooperate		Socialism		Equality		Social	
	A-B	B-A	A-B	B-A	A-B	B-A	A-B	B-A	A-B	B-A	A-B	B-A	A-B	B-A	A-B	B-A
Social																
U.S.	63	54	90	82	38	35	139	130	173	114	66	72	51	43		
Korean	156	156	92	116	130	132	244	243	175	191	168	163	179	137		
Colombian	71	74	153	164	96	111	128	143	174	190	248	231	151	164		
Equality																
U.S.	90	80	96	115	69	66	94	103	64	54	104	87				
Korean	142	154	109	163	84	132	119	133	125	154	232	181				
Colombian	81	83	126	113	116	129	92	95	115	126	189	160				
Socialism																
U.S.	99	63	401	394	99	96	147	160	83	61						
Korean	149	179	324	134	88	103	121	154	[illegible]	[illegible]						
Colombian	107	109	453	401	123	147	194	240	150	171						
To cooperate																
U.S.	59	78	41	61	28	37	57	77								
Korean	97	105	51	65	76	91	63	83								
Colombian	110	105	41	42	80	95	71	67								
Political																
U.S.	153	149	114	128	136	136										
Korean	292	281	90	104	242	242										
Colombian	139	139	181	176	177	201										
Power																
U.S.	214	186	115	122												
Korean	287	264	110	122												
Colombian	257	295	84	86												
Communism																
U.S.	117	117														
Korean	110	83														
Colombian	68	63														
To rule																
Average index *																
U.S.	114	108	133	145	97	94	121	126	73	69	129	138	156	76	91	76
Korean	176	175	96	144	146	155	170	179	87	113	125	178	143	154	163	165
Colombian	119	122	157	156	134	152	140	151	106	114	202	215	227	125	145	154

A-B: affinity of stimulus word A to stimulus word B. B-A: affinity of stimulus word B to stimulus word A. In comparing the indexes of intracultural associative affinity among the three groups, a difference $t \geq 55$ is generally significant at the 0.05 level and a difference of ≥ 83, at the 0.01 level.

* Average index of intracultural associative affinity for each word based on its interrelationships with the other seven.

Table B 16. Responses of Three Cultural Groups to Hungry by Content Category

Content Category	Response Score			Intercultural Score Differences Over 30					
	U.S.	Korean	Colombian	U.S.-Korean		U.S.-Colombian		Korean-Colombian	
Food, varieties and ingredients									
Food in general (food)	226	51	77	175		149			
Rice (cooked rice)	13	1.1			148			161	
Meat (steak)	36	16	20						
Dessert (cake)	18		13						
Other nonrice foods (bread)	28	20	46						
Drinks (water, milk)	6	2	9						
Total	327	250	165						
Meal, general and in particular (meal, dinner)	36	7	120				84		113
Persons, people (man, people)	85	192	42		107	43		150	
Poor, beggar (poor)	76	193	175		117		99		
Characteristics of beggars (ragged)		16	32				32		
Compassionate characteristics (sympathy, pitiful)	13	49			36			49	
Political, social, and economic situations (war)	54	110	95		56		41		
Help, relief (CARE)	23	6	6						
Contingent places (orphanage)	6	65	41		57		33		
Animals (dog, cow)		11	21						
Countries (Hungary, Brazil)	39		6	39		33			
Negative feelings (suffering, desperate)	112	115	161				48		46
Positive feelings (strength, satisfaction)	51	15	32	36					
Drive states (famished, thirst)	166	63	177	105					114
Body and parts (mouth)	63	24	12	39		51			
Eating and consumption (eat, swallow)	101	16	20	85		81			
Time (always, now)	41	30	6			35			
Miscellaneous	150	84	197						
Total	1,348	1,249	1,218	479	521	382	337	360	373

Main Comparabilities

U.S. - Korean		U.S. - Colombian		Korean - Colombian	
Food	51	Food	73	Food	51
Poor	29	Poor	40	Beggar	43
People	18	Starve	25	Poverty	38
Child	15	Thirsty	29	Money	36
Money	14	Money	14	Poor	36
Eat	13	Stomach	12	Hunger	14

Examples of responses follow categories in parentheses.

Table B 17. Responses of Three Cultural Groups to Food by Content Category

Content Category	Response Score			Intercultural Score Differences Over 30					
	U.S.	Korean	Colombian	U.S.-Korean		U.S.-Colombian		Korean-Colombian	
Food, varieties and ingredients									
Food in general (food)	8	60	17		52			43	
Meat (hamburger, roast beef)	127	57	57	40		70		30	
Rice (cooked rice)	4	109	39		105		35	70	
Nonrice foods (vegetables, cereal)	93	115	126				33		
Fruits (apple)	47	12	51	35					39
Dessert (candies)	53	4	13	49		40			
Drinks (milk)	14	9	73				59		63
Food ingredients (vitamins)	81	32	111	49			30		79
Total	427	428	486						
Meal and types (meal, dinner)	71	29	100	42			100		151
Persons (housewife)	18	35	33						
Biological and physiological contingencies (health, vigor)	73	113	183		40		110		70
Poor, beggar (poverty, begging)	16	23							
Places of purchase and consumption (market, restaurant)	57	83	46					37	
Eating and ways of consumption (eat, drink)	194	107	51	87		143		56	
Tools, equipment of consumption (spoon, dinner table)	47	39	64						
Production, processing (field crop, cooking)	59	77	60						
Money, economy (economize)	3	22	14						
Commerce (sale, advertising)	27		4						
Quantity (much, abundance)	20		17						
Religious (sacred, divine)			24						
Hunger (thirsty, hungry)	157	64	32	93		125		32	
Food qualities, reactions (delicious, good)	240	127	165	113		75			38
Total	1,453	1,189	1,348	506	197	453	375	312	440

Main Commonalities

U.S. - Korean		U.S. - Colombian		Korean - Colombian	
Eat	82	Meat	42	Rice	30
Hunger	37	Hunger	30	Hunger	26
Meat	36	Eat	28	Meat	26
Cooking	25	Meal	28	Kitchen	23
Restaurant	21	Delicious	18	Eat	23
Delicious	18	Table	18	Nutrition	20

Examples of responses follow categories in parentheses.

Table B 18. Responses of Three Cultural Groups to Rice by Content Category

Content Category	Response Score			Intercultural Score Differences Over 30					
	U.S.	Korean	Colombian	U.S.-Korean		U.S.-Colombian		Korean-Colombian	
Food, varieties and ingredients									
Food in general (food)	71	37	87	34					
Food ingredients (starch)	28	6	22						
Nonrice cereals (wheat)	70	23	110	47			40		87
Rice (cooked rice)	118	287	216		169		98	71	
Other nonrice foods (meat, butter)	76	89	62						
Total	363	442	497						
Meal, general and in particular (meal, lunch)	15	0	135				120		127
Rice cultivation									
Fields, harvest	63	75	40			43		35	
Plant (pollen)	16	50	62		34		46		
Farming, equipment (hoe)	21	39	37						
Climate (rain)	1	11	14						
Total	121	175	153						
Rice characteristics (white)	213	116		97		213		116	
Persons, people (farmer, Oriental)	25	96	24		71			72	
Business, economy (market, prices)		73	7		73			66	
Social and political conditions (war, politics)	38	31	6			30			
Ecology (mud, straw thatched hut)	8	32						32	
Consumption (eat)	9	48	15		31				
Tools of consumption (spoon, chopsticks)	33	56	56						
Hunger and related needs (hungry, necessities)	27	31	12						
Agricultural time (seasons, bumper year)	5	61	3		56			58	
Water	36	24	20						
Food preparation (cook, kitchen)	50	56	32						
Geographic locations (China, Southeast Asia)	274	12	53	262		221			41
Miscellaneous	83	72	74						
Total	1,308	1,325	1,000	440	404	511	304	454	305

Main Commonalities

U.S. - Korea		U.S. - Colombia		Korea - Colombia	
Rice field	40	Grain	58	Food	37
Food	37	Food	52	White	30
Water	24	White	47	Rice field	24
White rice	23	China	46	Water	20
Cook	19	Field	34	Eat	15
		Water	20		

Examples of responses follow categories in parentheses.

Table B 19. Responses of Three Cultural Groups to To Eat by Content Category

Content Category	Response Score			Intercultural Score Differences Over 20					
	U.S.	Korean	Colombian	U.S.-Korean		U.S.-Colombian		Korean-Colombian	
Food, varieties and ingredients									
Nonrice foods (meat, potatoes)	353	250	336	113					86
Rice (cooked rice)	2	231	23		229			208	
Drinks (water, milk)	65	28	30	37					
Total	420	509	387						
Persons, people (father, people)	28	47	56				28		
Biological and physiological contingencies (full stomach, health)	62	153	111		91		48	42	
Diet, overweight (fat, diet)	133	16	22	117		116			
Body parts (hand, mouth)	13	13	29						
Ways of foodtaking (consume)	172	47	124	126		48			77
Satisfaction and contingent feelings (enjoy, pleasure)	124	84	82	40		41			
Meal and types (dinner)	62	9	163	73					84
Contingent places (restaurant)	60	21	63	46					30
Time (always, evening)	53	21	9						
Contingent tools (table, fork)	42	16	90				48		74
Food preparation (cook, kitchen)	17	24	35						
Hunger (hungry)	142	113	94			48			
Quantity (much, little)	6	3	43				37		40
Social (reunion, feast)	19	29	15						
Money, economic (money, buy)	10	30	27						
Miscellaneous	85	70	140						
Total	1,665	1,295	1,449	854	220	244	164	255	410

Main Communalities

U.S. - Korean		U.S. - Colombian		Korean - Colombian	
Food	99	Food	103	Food	183
Hungry	91	Hunger	66	Hunger	66
Drink	23	Meal	36	Money	25
Meat	21	Meat	21	Live	24
Restaurant	18			Rice	23
				Meal	21

Examples of responses follow categories in parentheses.

Table B 50. Responses of Three Cultural Groups to Family by Content Category

Content Category	Response Score			Intercultural Score Differences Over 30				
	U.S.	Korean	Colombian	U.S.-Korean	U.S.-Colombian		Korean-Colombian	
People								
Father, mother	180	131	278	49		98		147
Parents	53	73	50					
Sisters, brothers	203	144	203	59				62
Ancestors, grandparents	38	25	44					
Aunt, in-laws	123	54	117	69				63
Total	597	427	695					
Life, work (living, occupation)	27	14	9					
Education (manners, family education)	2	18	20					
Religion (Catholic, pray)	16	9	8					
Home, house, equipment (seat, home)	150	75	132	84				57
Items, events of common origin (dinner, family car)	144	56	76	66	68			
Common efforts and contingencies (planning, service)	50	27	33					
Positive values and qualities (loyalty, filial)	36	33	49					
Size, background, other characteristics (small, organizational)	109	103	66		43		37	
Indications of discord (betrayal, quarrel)	27	19	16					
Interpersonal relationships (devotion, happiness)	246	141	185	105	61			44
Animals, biology (dog, flower, family)	35	3		32	35			
Miscellaneous	54	46	33					
Total	1,512	973	1,313	484	307	98	37	373

Key's Commonalities

U.S. - Korean		U.S. - Colombian		Korean - Colombian	
Mother	77	Mother	91	Mother	77
Father	54	Father	80	Father	54
Parents	53	Home	87	Parents	80
Children	30	Brothers	73	Children	30
Happiness	30	Love	54	Love	28
Love	28	Parents	50	House	21

Examples of responses below categories in parentheses.

Table 5 71. Responses of Three Cultural Groups to Ancestors by Content Category

Content Category	Response Score			Interval ural Score Differences Over 30					
	U.S.	Korean	Colombian	U.S.-Korean		U.S.-Colombian		Korean-Colombian	
Relatives, family, home (father, relatives)	161	158	106			75		83	
Remote, past relatives (grandfather, great uncle)	152	97	69	75		73			
Other persons (elderly man)	31	26	26						
Foreign nations, countries (Europe, foreigners)	119		9	110		101			
Historical figures (Tasksa, George Washington)	73	47	10			63		37	
Ancient times and times past (former, ancient)	104	29	280	75			176		251
Culture, tradition (tradition, custom)	22	30	11						
Primitive, animal progenitors (apes, caveman)	62	7	6	55		56			
Biology and genetics (gene, heredity)	49	12	30	37					
Genealogical connotations (family tree, descendants)	136	103	251	35			113		148
Positive characteristics (reputable, good)	46	36	72						36
Negative characteristics (general, unkind)	41	4	27	37					
Positive reactions, attitudes (devotion, loyalty)	40	152	41		112			111	
Negative reactions, attitudes (neglect)	17		26						
Historic activities, occasions (Pilgrims, founders)	107	83	140				33		57
Religious, mythological connotations (eternal, wonder)	19	31	17						
Death, funeral ceremonies (graves, ceremony)	21	266	6		245			260	
Miscellaneous	49	7	32						
Total	1,272	1,048	1,182	424	357	346	322	661	492

Main Consonantities

U.S. - Korean		U.S. - Colombian		Korean - Colombian	
Grandmother	24	Grandparents	42	Grandfather	24
History	22	Predecessors	30	Ancestors	21
Family	18	Family	28	Parents	19
		Old	23	Family	16

Examples of responses follow categories in parentheses.

Table B 22. Responses of Three Cultural Groups to Socialism by Content Category

Content Category	Response Score			Intercultural Score Differences Over 20					
	U.S.	Korea	Colombia	U.S.-Korea	U.S.-Colombia		Korea-Colombia		
Persons, people (Marx, Robin Hood)	153	57	143	96					86
Nations (Japan, U.S.A.)	166	103	63	65	103		40		
Society and class (social system, society)	11	30	92			61			54
Parties and political groupings (Communist Party, group)	9	29	30						
Sociopolitical doctrines and systems (empiricism, reformism)	334	275	153	58	176		117		
Political organizations, exertion of power (dictatorship, riot)	139	42	101	88					59
Communication, education, public opinion (radio, knowledge)	16	16	36						
Economy, economic situations (utilities, welfare)	95	37	74	58					37
Qualities and features, positive or neutral connotation (freedom, rights)	99	99	139						
Qualities and features, negative connotation (ruin, ill.)	21	36	44						
Characteristics of positive or neutral connotation (united, free)	84	57	85						
Characteristics of negative connotation (uncivil, weak)	55	26	26						
Actions and activities (to rule, fighting)	4	17	37			33			
General, unspecified meaning (tendency, end)	25	38	33						
Miscellaneous (toy, some)	33	17	73			51			36
Total	1,220	874	1,046	330	301	165	157		192

Main Commonalities

U.S. - Korea		U.S. - Colombia		Korea - Colombia	
Communism	100	Communism	46	Communism	48
Capitalism	27	Russia	28	Politics	34
Russia	21	Equality	23	Russia	21
Politics	17	Government	23	Capitalism	13
England	15	Politics	17	Politics	34
Marx	14	People	18	Freedom	30

Examples of responses follow categories in parentheses.

Table B 23. Responses of Three Cultural Groups to Capitalism by Content Category

Content Category	Response Score			Intercultural Score Differences Over 20					
	U.S.	Korean	Colombian	U.S.-Korean		U.S.-Colombian		Korean-Colombian	
Persons, people (Rockefeller, capitalist)	137	215	155		98		38	60	
Nations (U.S.A., Free World)	177	211	66		34	129		163	
Financial (banking, income tax)	187	114	190	73					76
Economic (trade, free enterprise)	305	169	279	213		112			101
Social and political concepts (government, communism)	271	272	350				80		91
Education, religion, and history (Christianity, tradition)	96	35	63				43		
Qualities and characteristics									
Positive (desire, independent)	60	27	60	42					33
Negative (corruption, greedy)	62	82	53		42				
Miscellaneous	31	9	101				68		71
Total	1,303	1,134	1,290	328	184	241	227	223	372

Main Commonalities

U.S. - Korean		U.S. - Colombian		Korean - Colombian	
Money	83	Money	69	Money	62
Communism	78	Socialism	41	Business	16
Democracy	28	Government	25	Capitalist	13
Business	15	Business	18	Communism	12
		U.S.A.	14	Economy	10
		Freedom	13		
		Communism	13		

Examples of responses follow categories in parentheses.

Table B 34. Responses of Three Cultural Groups to Communism by Content Category

Content Category	Response Score			Intercultural Score Differences Over 30					
	U.S.	Korean	Colombian	U.S.–Korean		U.S.–Colombian		Korean–Colombian	
Persons, groups (barbarians, Lenin)	248	192	157	54		90		35	
Countries, nations (America, Cuba)	268	199	141	69		127		58	
Political concepts, ideas (materialism, fascism)	238	237	238						
Political action, activities (strike, demonstration)	65	52	23						
Society, classes, labor (family, cooperatives)	114	122	120						
Economy, economic situations (growth, possession)	48	47	51						
Ideology, propaganda (capital, manifesto)	50	37	92						55
Military, space, armament (invasion, sputnik)	48	31	27						
Terror, suppression (opposition, tyranny)	35	58	71				36		
Religious connotations (God, Catholicism)	6	9	50				44		45
Items, events of symbolic or historical importance (swastika, Iron Curtain)	98	96	25			73		65	
Positive evaluation (joy, freedom)	32	18	27						
Negative evaluation (danger, darkness)	111	176	143		65		32	33	
Miscellaneous (oath, school)	21	33	79				58		46
Total	1,360	1,286	1,244	123	65	289	170	191	146

Main Commonalities

U.S. – Korean		U.S. – Colombian		Korean – Colombian	
Soviet Russia	58	Russia	79	Russia	27
Karl Marx	45	Socialism	38	Capitalism	21
Lenin	28	Castro	32	Khrushchev	17
China (Red)	27	Khrushchev	22	Poverty	16
Russia	27	Bad	22	Karl Marx	15
Red	26	Capitalism	21	Lenin	12

Examples of responses follow categories in parentheses.

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